



US Army Corps
of Engineers
Alaska District

Public Notice of Application for Permit

Regulatory Division (1145)
CEPOA-RD
Post Office Box 6898
Elmendorf AFB, Alaska 99506-0898

PUBLIC NOTICE DATE:	2 May 2007
EXPIRATION DATE:	1 June 2007
REFERENCE NUMBER:	POA-1989-402-R POA-2004-281-4
WATERWAY:	Campbell Creek

Interested parties are hereby notified that a Department of the Army permit application has been received for work in waters of the United States as described below and shown on the enclosed project drawings.

APPLICANT: Anchorage Water and Wastewater Utility (AWWU), 3000 Arctic Boulevard, Anchorage, AK, 99503-3898, and Municipality of Anchorage (MOA), Project Management and Engineering, 4700 South Bragaw Street, Anchorage, AK, 99507, respectively.

AGENT: MOA Agent: DOWL Engineers, 4041 B Street, Anchorage, AK 99503-5907.

LOCATION: The project site is located within Section 34, T. 13 N., R. 3 W., Seward Meridian; Latitude 61.179° N., Longitude -149.800° W.; south of Tudor Road between Boniface Parkway and Bragaw Street, in Anchorage, Alaska.

PURPOSE: The applicants' stated purposes are to install a 48-inch water line and to construct two roads - 48th Avenue between Boniface Parkway and Bragaw Street and Tudor Centre Drive extension between Tudor Road and 48th Avenue - and associated pedestrian facilities and multi-use trails.

PROPOSED WORK: The 48" water line would be approximately 5700 feet long, of which approximately 2800 feet would be in wetlands. Approximately 2.4 acres of wetlands would be temporarily cleared and those outside the footprint of the road would be restored. Within the road prism, the area would be reseeded with native grasses. Approximately 18,000 cubic yards (CY) would be excavated. Of this, approximately 4,100 CY would be removed from the site and placed in an upland disposal area and approximately 13,900 CY of excavated material would be replaced into the excavated ditch. Approximately 2,900 CY of sand and gravel bedding material would be imported and placed in the excavated ditch. Approximately 1.6 acres of subsurface would be permanently displaced.

48th Avenue would be approximately 6,500 feet long; Tudor Centre Drive extension would be approximately 1,300 feet long. A round-about would be constructed to

connect the two roads. Approximately 5,298 feet of dog mushing trails would be constructed. Approximately 11.8 acres of wetland would be filled for the roadway and 1.02 acres of wetland would be filled for the trails for a total of 12.82 acres. Approximately 84,240 CY of material would be excavated from the wetlands; approximately 162,180 CY of fill would be imported and placed onto wetlands.

ADDITIONAL INFORMATION:

To minimize impacts, the MOA has coordinated the construction of the water line and 48th Avenue. The water line would be installed first. The road prism would overlap the area impacted for the installation of the water line to the greatest extent possible, consistent with prudent engineering.

West of Tudor Centre Drive the construction corridor would range from 85-feet to 130-feet wide and is mostly outside the road prism (sheets 4 and 16-17). The soils indicate the potential the weight of the road to cause settling of the pipeline that would exceed the acceptable tolerance limits for the water line. In the B wetland areas excavated material would be side-cast and then replaced. Within the road prism, it would be revegetated per sheet 21. Outside the road prism, the area would be revegetated per sheet 23 for the C wetland and per sheet 22 for the B wetland.

Trench plugs would be placed along the pipeline route to prevent dewatering of adjacent wetlands through the pipe bedding. Because the pipe has a continuous slope from east to west, trench plugs would be placed only at the west end of the wetland areas transited by the pipeline. Trench plugs would be placed at STA 6+10, STA 11+60, STA 27+40, and STA 46+80. In each instance a 12-inch cap would be placed over the pipe zone material. Trench plugs would extend to a height above the water table shown in the soil borings.

The contractor would not use ditches and/or sumps as the primary means of dewatering the trench prior to pipeline installation. It is likely that the contractor would use a well point system similar to what was used for the Abbott Loop - Bragaw Street Connection. Prior to work, the contractor will submit an engineered dewatering plan that will detail how the contractor plans to dewater the pipeline trench

For the road-related construction that follows the installation of the pipeline, the MOA would construct a 9-foot wide multi-used paved pathway along the north side of 48th Avenue and a 10-foot wide multi-use trail on the south side of 48th Avenue. Separated multi-use pathways would also be located on both sides of Tudor Centre Drive. In-lane bicycle lanes are proposed on both sides of 48th Avenue and Tudor Centre Drive (Sheets 4-6).

An upland section of 48th Avenue would be bridged over the trail to Tudor Road to allow construction of an underpass for moose and pedestrians (Sheet 1). The 75-foot span has been designed to provide adequate width for both the trail and a wildlife crossing. Equalizer culverts would be used maintain groundwater flow patterns in areas where the new roadway bisects the wetlands.

Campbell Creek Trail, the Tour of Anchorage Trail, and sled dog mushing trails would be realigned. The Campbell Creek rail would continue to be a paved multi-use trail. The Tour of Anchorage Trail would be unpaved until it meets with the Campbell Creek trail. The combined trail would be a paved multi-use trail.

Road construction would occur year-round, but activities would vary based on construction stage and location. To avoid impacting bird nesting, clearing and grubbing would occur in late fall or winter.

MITIGATION: The applicant has proposed the following mitigation measures to reduce impacts to the aquatic environment:

1. The Anchorage Sled Dog Racing Association Trail will be constructed on a boardwalk and not on gravel fill where it crosses the Class A wetlands on the eastern portion of the project.
2. A 1,215-foot section of the Campbell Creek Trail that is to be abandoned and rerouted due to the proposed road alignment will be removed and the area fertilized to encourage natural revegetation.
3. Large riprap material will be placed strategically along the toe-of slope of the roadbed to discourage moose from climbing onto the road.

WATER QUALITY CERTIFICATION: A permit for the described work will not be issued until a certification or waiver of certification, as required under Section 401 of the Clean Water Act (Public Law 95-217), has been received from the Alaska Department of Environmental Conservation.

COASTAL ZONE MANAGEMENT ACT CERTIFICATION: Section 307(c)(3) of the Coastal Zone, Management Act of 1972, as amended by 16 U.S.C. 1456(c)(3), requires the applicant to certify the described activity affecting land or water uses in the Coastal Zone complies with the Alaska Coastal Management Program. A permit will not be issued until the Office of Project Management and Permitting, Department of Natural Resources has concurred with the applicant's certification.

CULTURAL RESOURCES: The latest published version of the Alaska Heritage Resources Survey (AHRS) has been consulted for the presence or absence of historic properties, including those listed in or eligible for inclusion in the National Register of Historic Places. One site has been determined to be ineligible for the National Register of Historic Places; a second site is beyond the impact area of the project. However, a third site was identified when the area was surveyed for cultural resources on August 3 and 5, 2006 by Reger Archaeological Consultants. This unevaluated property in the vicinity of the worksite has been designated ANC-2361. Because the property has been determined to lie within the project area, a determination of eligibility and, if needed, a determination of effect will be made in consultation with the State Historic Preservation Officer (SHPO). Consultation of the AHRS constitutes the extent of cultural resource investigations by the District Commander at this time. This application is being coordinated with SHPO. Any comments SHPO may have concerning presently unknown archeological or historic data that may be lost or destroyed by work under the requested permit will be considered in our final assessment of the described work.

ENDANGERED SPECIES: No threatened or endangered species are known to use the project area. Preliminarily, the described activity will not affect threatened or endangered species, or modify their designated critical habitat, under the Endangered Species Act of 1973 (87 Stat. 844). This application is being coordinated with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (NMFS). Any comments they may have concerning endangered or threatened wildlife or plants or their critical habitat will be considered in our final assessment of the described work.

ESSENTIAL FISH HABITAT: The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, requires all Federal agencies to consult with the NMFS on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH).

Preliminarily, the described activity will not affect EFH in the project area. This Public Notice initiates EFH consultation with the NMFS. Any comments or recommendations they may have concerning EFH will be considered in our final assessment of the described work.

TRIBAL CONSULTATION: The Alaska District fully supports tribal self-governance and government-to-government relations between Federally recognized Tribes and the Federal government. Tribes with protected rights or resources that could be significantly affected by a proposed Federal action (e.g., a permit decision) have the right to consult with the Alaska District on a government-to-government basis. Views of each Tribe regarding protected rights and resources will be accorded due consideration in this process. This Public Notice serves as notification to the Tribes within the area potentially affected by the proposed work and invites their participation in the Federal decision-making process regarding the protected Tribal right or resource. Consultation may be initiated by the affected Tribe upon written request to the District Commander during the public comment period.

PUBLIC HEARING: Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, reasons for holding a public hearing.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the proposed activity and its intended use on the public interest. Evaluation of the probable impacts, which the proposed activity may have on the public interest, requires a careful weighing of all the factors that become relevant in each particular case. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. The outcome of the general balancing process would determine whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur. The decision should reflect the national concern for both protection and utilization of important resources. All factors, which may be relevant to the proposal, must be considered including the cumulative effects thereof. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving 404 discharges, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency's 404(b)(1) guidelines. Subject to the preceding sentence and any other applicable guidelines or criteria (see Sections 320.2 and 320.3), a permit will be granted unless the District Commander determines that it would be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Comments on the described work, with the reference number, should reach this office no later than the expiration date of this Public Notice to become part of the record and be considered in the decision. Please contact **Maureen McCrea** at (907) 753-2712, toll free from within Alaska at (800) 478-2712, or by email at maureen.mccrea@poa02.usace.army.mil if further information is desired concerning this notice.

AUTHORITY: This permit will be issued or denied under the following authorities:










(X) Discharge dredged or fill material into waters of the United States - Section 404 Clean Water Act (33 U.S.C. 1344). Therefore, our public interest review will consider the guidelines set forth under Section 404(b) of the Clean Water Act (40 CFR 230).

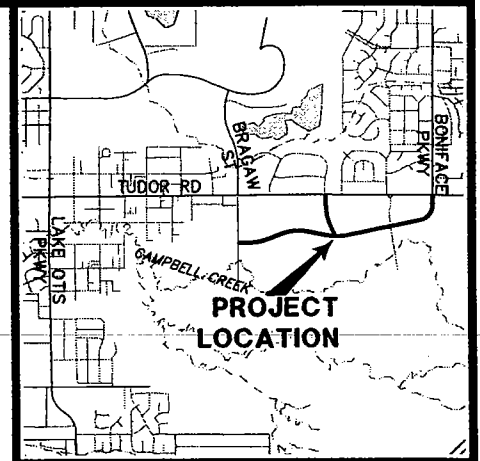
Project drawings, Notice of Application for Certification of Consistency with the Alaska Coastal Management Program, and Notice of Application for State Water Quality Certification are enclosed with this Public Notice.

District Commander
U.S. Army, Corps of Engineers

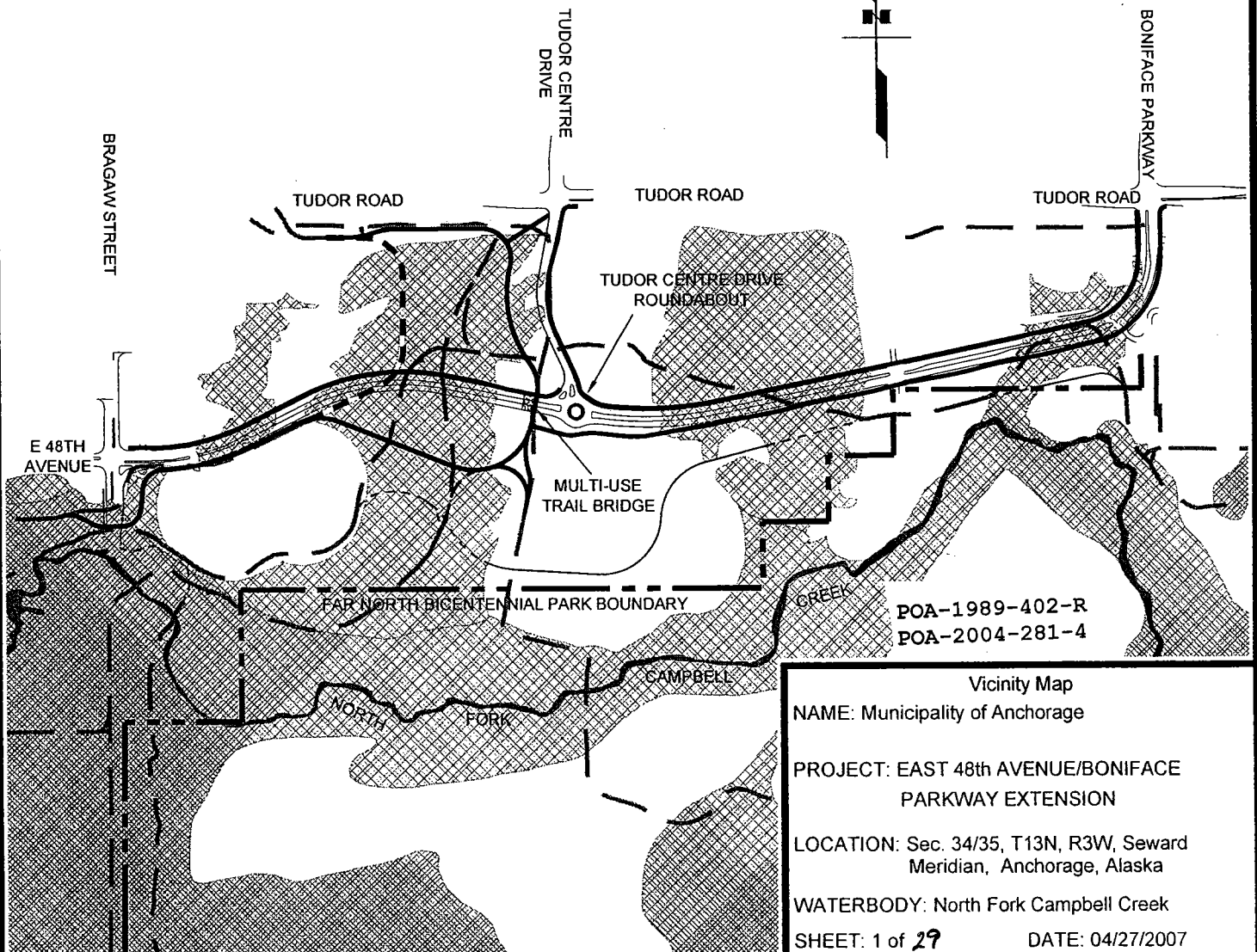
Enclosures

LEGEND

-  DELINEATED WETLAND AREAS
-  AWWU WATER TRANSMISSION LINE WORK LIMIT BOUNDARY
-  EXISTING TRAIL
-  EXISTING TRAIL - REMOVE AND FERTILIZE TO PROMOTE NATURAL REVEGETATION
-  PROPOSED EDGE OF PAVEMENT
-  PROPOSED DOG MUSHING TRAIL - UPLAND
-  PROPOSED DOG MUSHING TRAIL - WETLAND
-  PROPOSED FUR RONDY TRAIL CONNECTION
-  PROPOSED MULTI-USE TRAIL - PAVED



0 800 1600
SCALE IN FEET



Vicinity Map

NAME: Municipality of Anchorage

PROJECT: EAST 48th AVENUE/BONIFACE PARKWAY EXTENSION

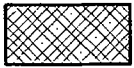
LOCATION: Sec. 34/35, T13N, R3W, Seward Meridian, Anchorage, Alaska

WATERBODY: North Fork Campbell Creek

SHEET: 1 of 29

DATE: 04/27/2007

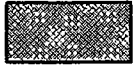
WETLAND IMPACT HATCH PATTERNS



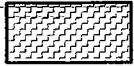
EAST 48th AVENUE/BONIFACE PARKWAY EXTENSION AND CAMPBELL CREEK TRAIL PERMANENT WETLAND IMPACT AREAS



AWWU WATER TRANSMISSION LINE TEMPORARY SURFACE/PERMANENT SUBSURFACE IMPACT AREAS (OUTSIDE THE PROPOSED ROAD PRISM)



ALASKA SLED DOG RACING ASSOCIATION TRAIL PERMANENT WETLAND CLEARING LIMIT AREAS



AWWU PROPOSED WATER TRANSMISSION LINE TEMPORARY CLEARING LIMIT AREAS

1

WETLAND IMPACT AREA IDENTIFICATION (AREA IN SQUARE FEET AND ACRES)

66sf
0.002ac

LEGEND



AWWU PROPOSED WATER TRANSMISSION LINE FOOTPRINT



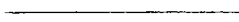
AWWU PROPOSED WATER TRANSMISSION LINE TRENCH EXCAVATION LIMIT



AWWU PROPOSED WATER TRANSMISSION LINE



AWWU PROPOSED WATER TRANSMISSION LINE MANWAY



PROPOSED EDGE OF ROAD/EDGE OF TRAIL



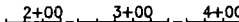
EAST 48th AVENUE/BONIFACE PARKWAY EXTENSION AND CAMPBELL CREEK TRAIL CUT/FILL LIMIT (FOOTPRINT)



VEGETATION LIMIT



PROPOSED CULVERT LOCATION



EAST 48th AVENUE/BONIFACE PARKWAY EXTENSION PROPOSED STATIONING

PP-29



APPROXIMATE PEAT PROBE LOCATION

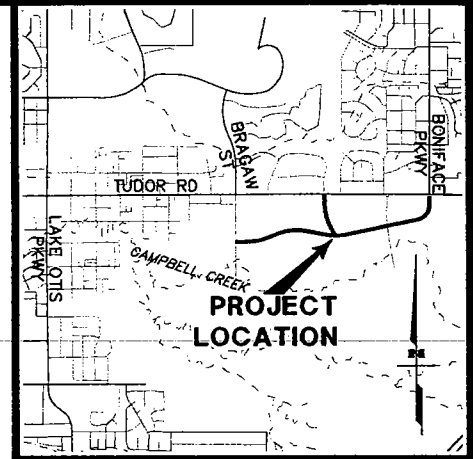
TB-7



APPROXIMATE TEST BORE LOCATION



PROFILE TEST BORES/PEAT PROBES HAVE BEEN OFFSET (FOR VIEWING EASE)



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Legend

NAME: Municipality of Anchorage

PROJECT: EAST 48th AVENUE/BONIFACE PARKWAY EXTENSION

LOCATION: Sec. 34/35, T13N, R3W, Seward Meridian, Anchorage, Alaska

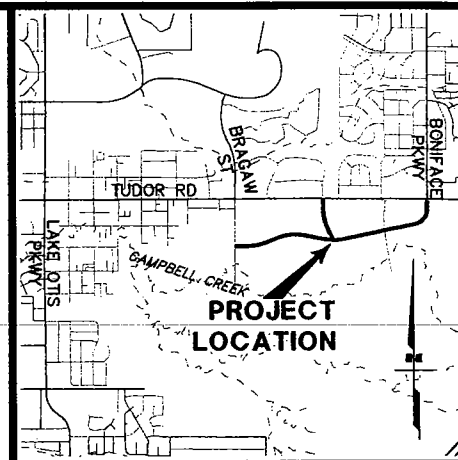
WATERBODY: North Fork Campbell Creek

SHEET: 2 of 29

DATE: 04/27/2007

WETLAND IMPACT AREA TABLE

Area ID	Wetland ImpactType	Area (SF)	Area (Acres)
1	ASDRA PERMANENT CLEARING	375	0.009
2	PERMANENT WETLAND FILL	2335	0.054
3	PERMANENT WETLAND FILL	48687	1.118
4	ASDRA PERMANENT CLEARING	225	0.005
5	ASDRA PERMANENT CLEARING	1514	0.035
6	AWWU TEMPORARY CLEARING	9200	0.211
7	AWWU TEMPORARY SURFACE/PERMANENT SUBSURFACE	9353	0.215
8	AWWU TEMPORARY CLEARING	7085	0.163
9	PERMANENT WETLAND FILL	39217	0.900
10	AWWU TEMPORARY CLEARING	12120	0.278
11	ASDRA PERMANENT CLEARING	1409	0.032
12	AWWU TEMPORARY SURFACE/PERMANENT SUBSURFACE	13581	0.312
13	AWWU TEMPORARY CLEARING	9477	0.218
14	ASDRA PERMANENT CLEARING	13618	0.313
15	PERMANENT WETLAND FILL	25526	0.586
16	ASDRA PERMANENT CLEARING	3463	0.079
17	PERMANENT WETLAND FILL	80996	1.859
18	ASDRA PERMANENT CLEARING	1364	0.031
19	AWWU TEMPORARY CLEARING	2542	0.058
20	ASDRA PERMANENT CLEARING	824	0.019
21	AWWU TEMPORARY SURFACE/PERMANENT SUBSURFACE	22716	0.521
22	AWWU TEMPORARY CLEARING	18622	0.428
23	ASDRA PERMANENT CLEARING	298	0.007
24	ASDRA PERMANENT CLEARING	5028	0.115
25	PERMANENT WETLAND FILL	152848	3.509
26	AWWU TEMPORARY SURFACE/PERMANENT SUBSURFACE	17927	0.412
27	AWWU TEMPORARY CLEARING	43593	1.001
28	ASDRA PERMANENT CLEARING	4578	0.105
29	ASDRA PERMANENT CLEARING	3031	0.070
30	ASDRA PERMANENT CLEARING	3054	0.070
31	PERMANENT WETLAND FILL	71152	1.633
32	AWWU TEMPORARY CLEARING	65	0.001
33	AWWU TEMPORARY SURFACE/PERMANENT SUBSURFACE	7479	0.172
34	ASDRA PERMANENT CLEARING	595	0.014
35	PERMANENT WETLAND FILL	29855	0.685
36	AWWU TEMPORARY SURFACE/PERMANENT SUBSURFACE	5821	0.134
37	AWWU TEMPORARY SURFACE/PERMANENT SUBSURFACE	291	0.007
38	AWWU TEMPORARY CLEARING	1006	0.023
39	PERMANENT WETLAND FILL	20	0.000
40	PERMANENT WETLAND FILL	38	0.001
41	PERMANENT WETLAND FILL	3929	.090
42	PERMANENT WETLAND FILL	1603	0.037
43	TUDOR CENTER DRIVE PERMANENT WETLAND FILL	5615	0.129
44	TUDOR CENTER DRIVE PERMANENT WETLAND FILL	3460	0.079
45	TUDOR CENTER DRIVE PERMANENT WETLAND FILL	13710	0.315
UPLAND IMPACTS			
TOTAL ROAD FOOTPRINT UPLAND IMPACT		513778	11.795
TOTAL TRAIL UPLAND IMPACT		31203	0.716
TOTAL AWWU WATER TRANSMISSION LINE UPLAND IMPACT		223139	5.123

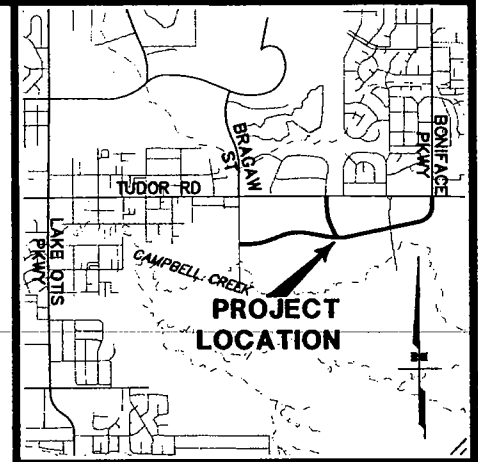
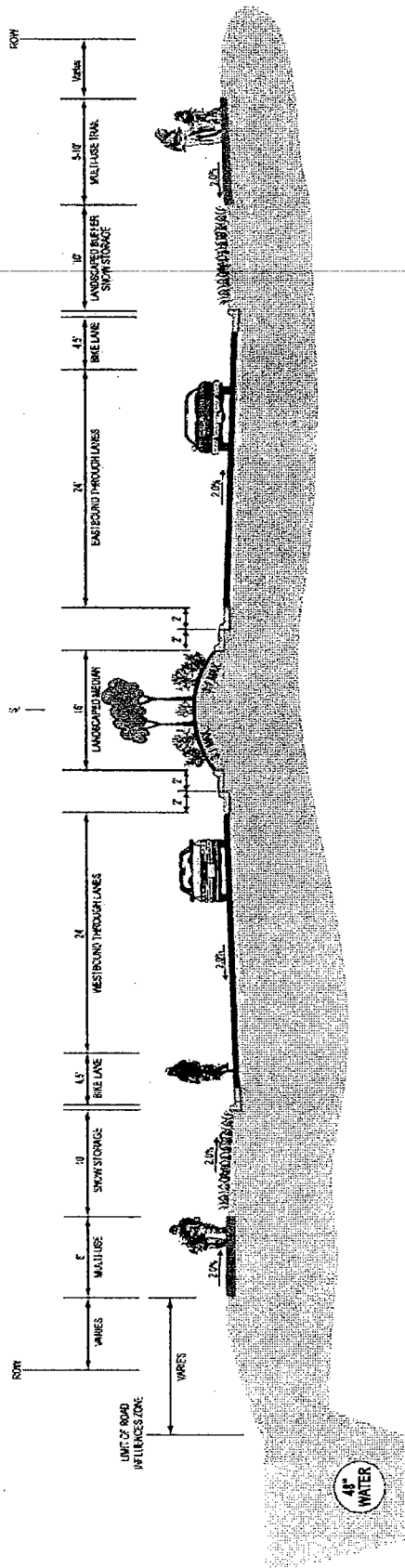


POA-1989-402-R
POA-2004-281-4

Wetland Impact Table
NAME: Municipality of Anchorage

PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION

LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska
WATERBODY: North Fork Campbell Creek
SHEET: 3 of 29 DATE: 04/27/2007



POA-1989-402-R
POA-2004-281-4

AWWU Waterline Outside Road Prism (TYP)
NAME: Municipality of Anchorage

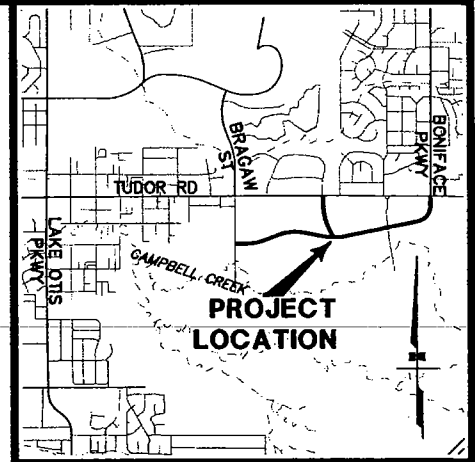
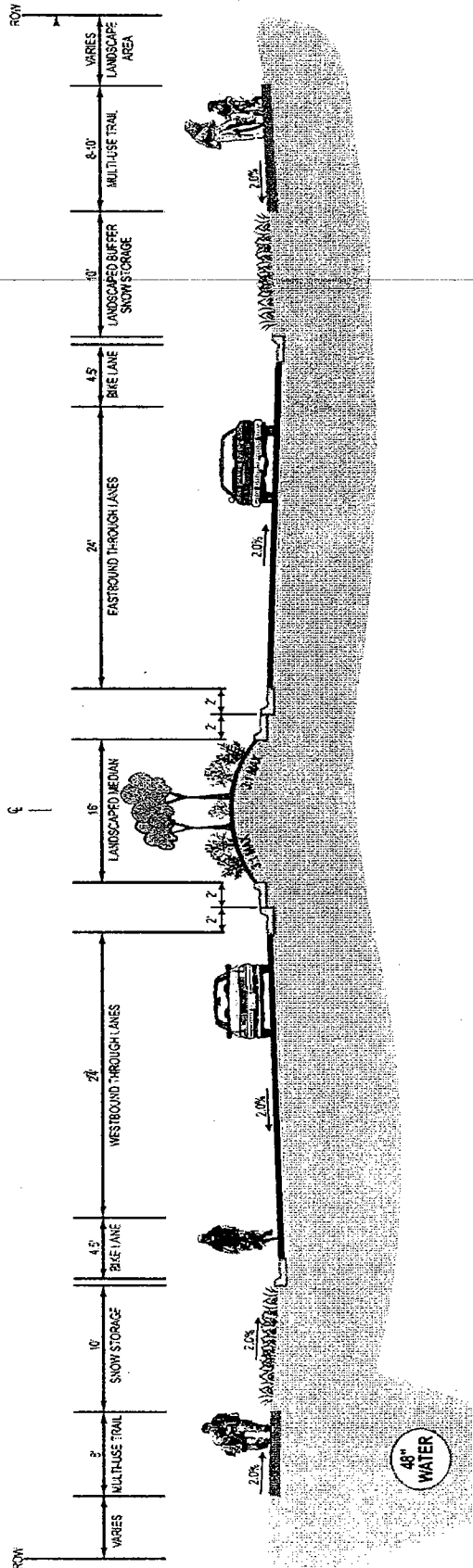
PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION

LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska

WATERBODY: North Fork Campbell Creek

SHEET: 4 of 29

DATE: 04/27/2007



POA-1989-402-R
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AWWU Waterline Within Road Prism (TYP)
NAME: Municipality of Anchorage

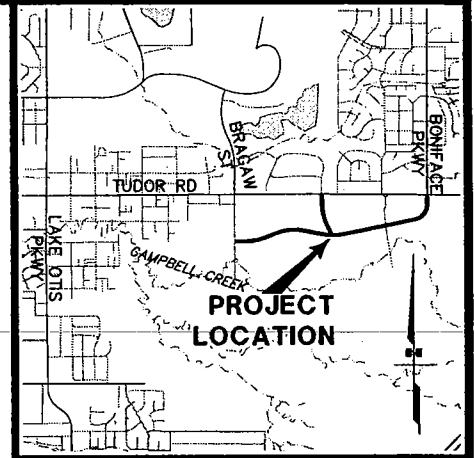
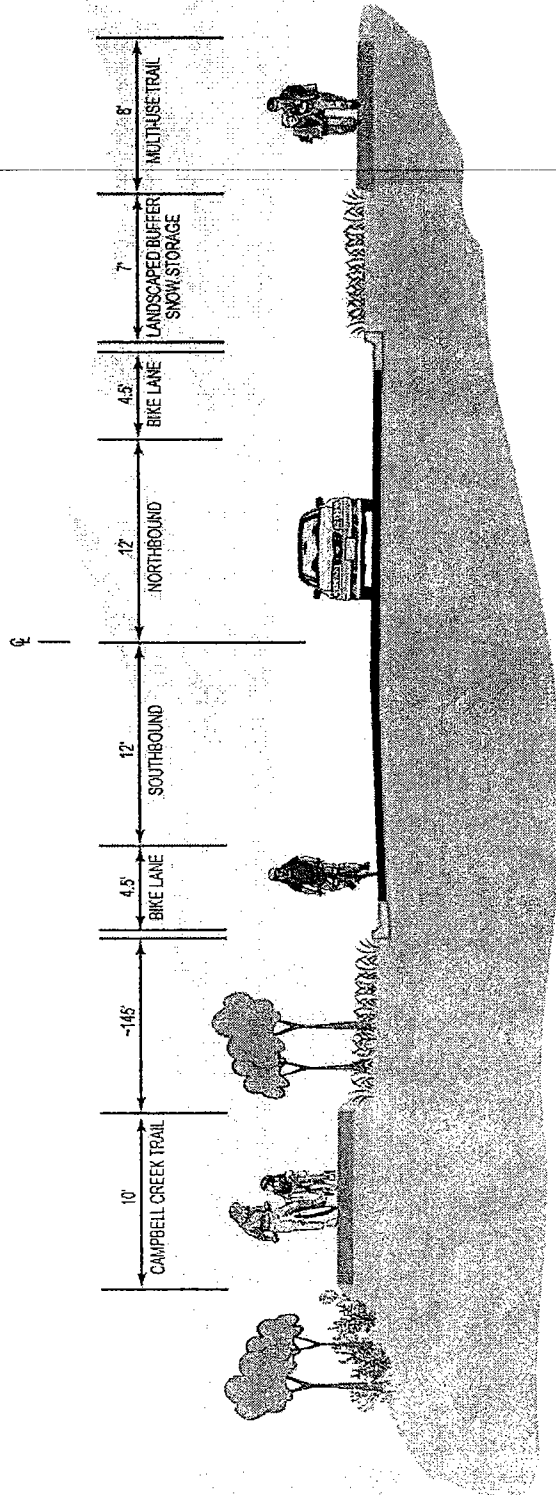
PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION

LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska

WATERBODY: North Fork Campbell Creek

SHEET: 5 of 29

DATE: 04/27/2007



POA-1989-402-R
POA-2004-281-4

Tudor Centre Drive (TYP)
NAME: Municipality of Anchorage

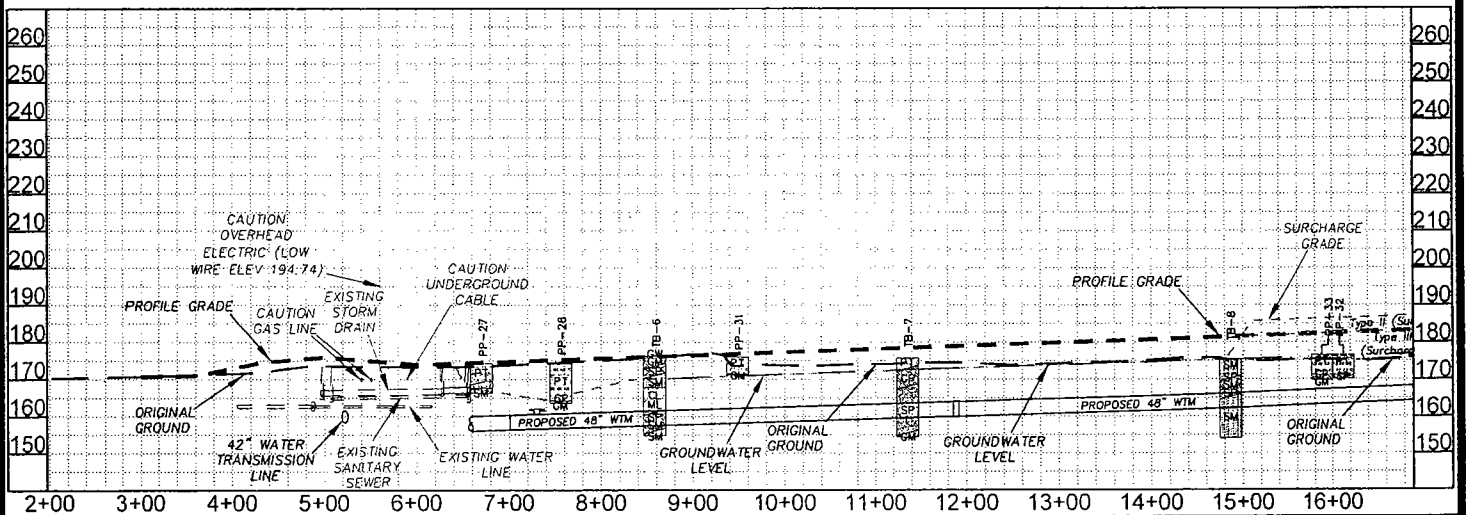
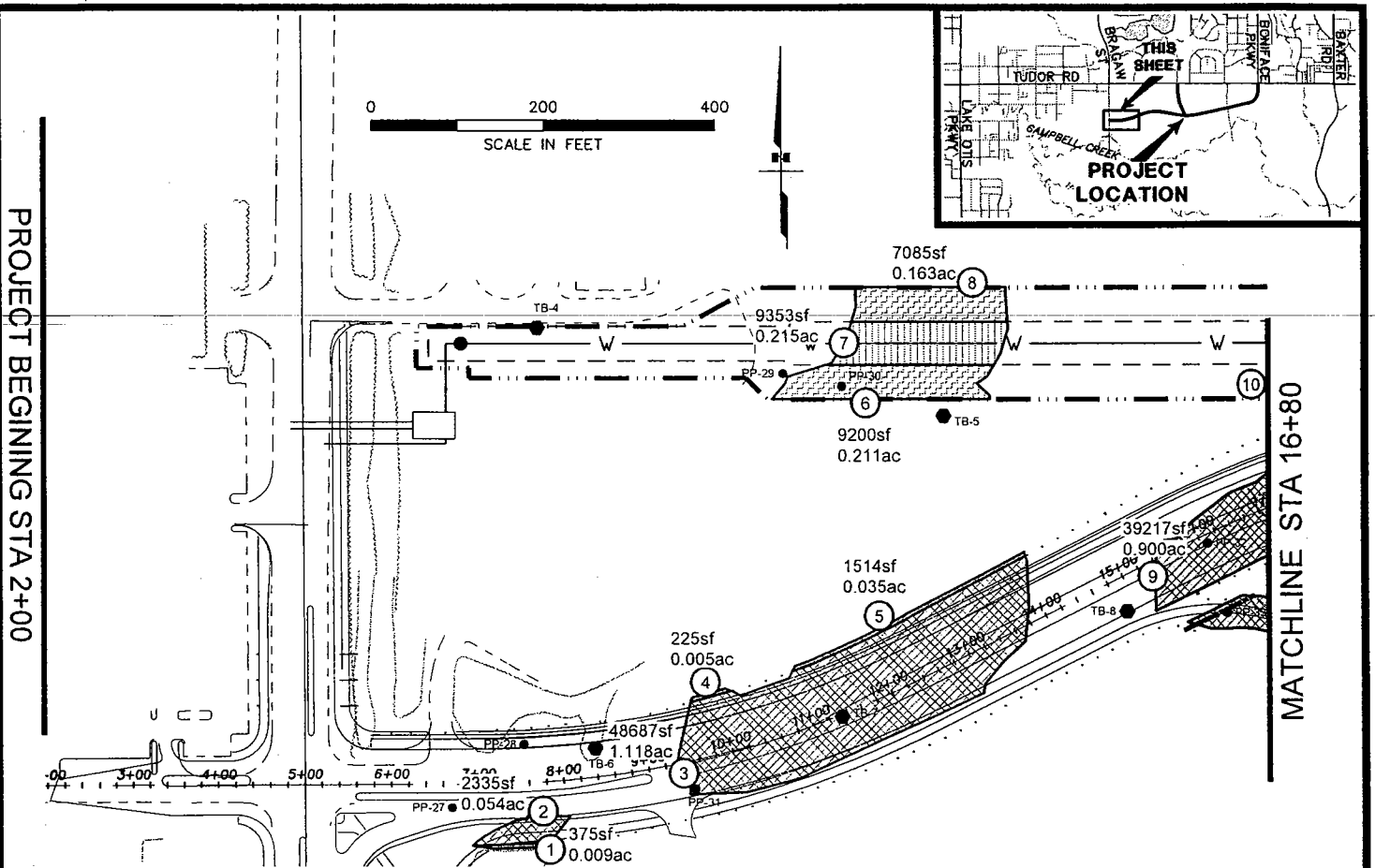
PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION

LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska

WATERBODY: North Fork Campbell Creek

SHEET: 6 of 29

DATE: 04/27/2007



WETLAND IMPACT HATCH PATTERNS

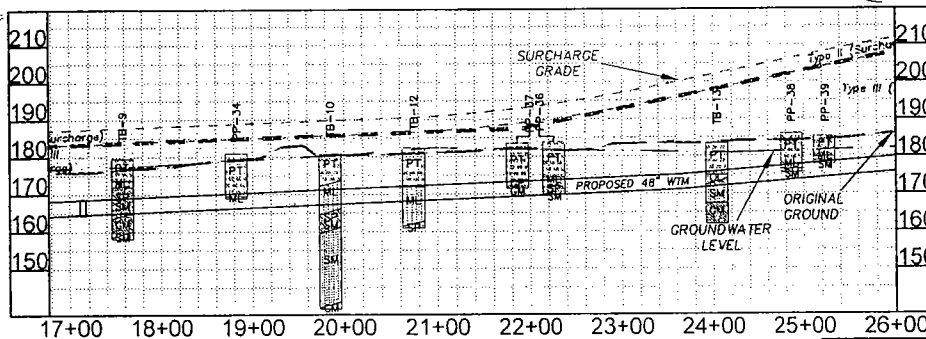
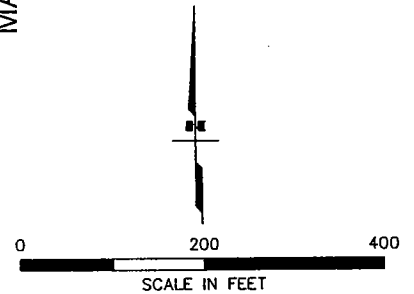
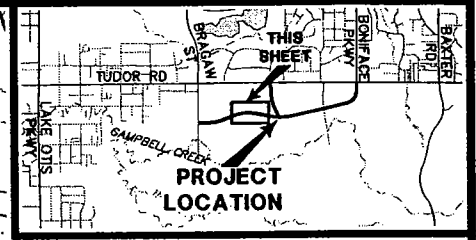
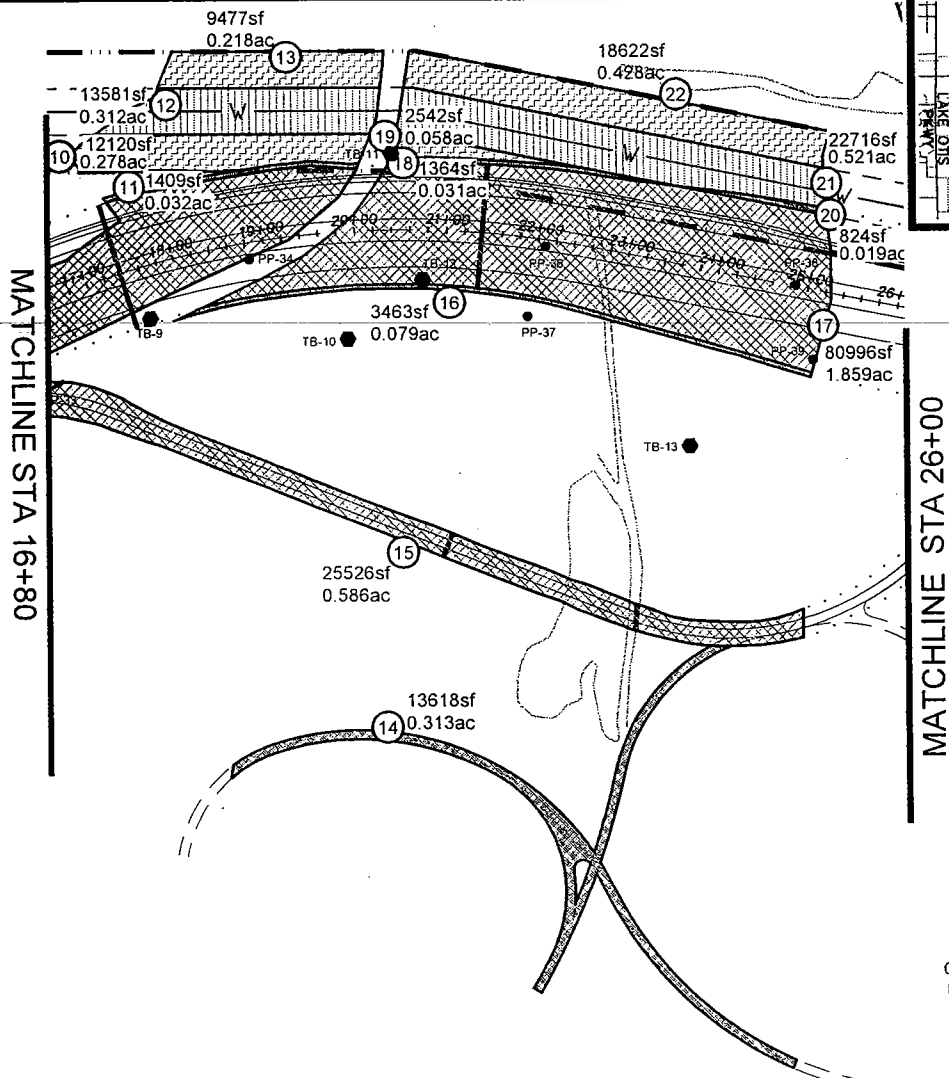
- EAST 48th AVENUE/BONIFACE PARKWAY EXTENSION AND CAMPBELL CREEK TRAIL PERMANENT WETLAND IMPACT AREAS
- AWWU WATER TRANSMISSION LINE TEMPORARY SURFACE/PERMANENT SUBSURFACE IMPACT AREAS (OUTSIDE THE PROPOSED ROAD PRISM)
- PERMANENT WETLAND CLEARING LIMIT AREAS
- AWWU PROPOSED WATER TRANSMISSION LINE TEMPORARY CLEARING LIMIT AREAS

Plan and Profile STA 2+00 - 16+80
NAME: Municipality of Anchorage

PROJECT: EAST 48th AVENUE/BONIFACE PARKWAY EXTENSION
LOCATION: Sec. 34/35, T13N, R3W, Seward Meridian, Anchorage, Alaska.
WATERBODY: North Fork Campbell Creek

SHEET: 7 of 29

DATE: 04/27/2007



POA-1989-402-R
POA-2004-281-4

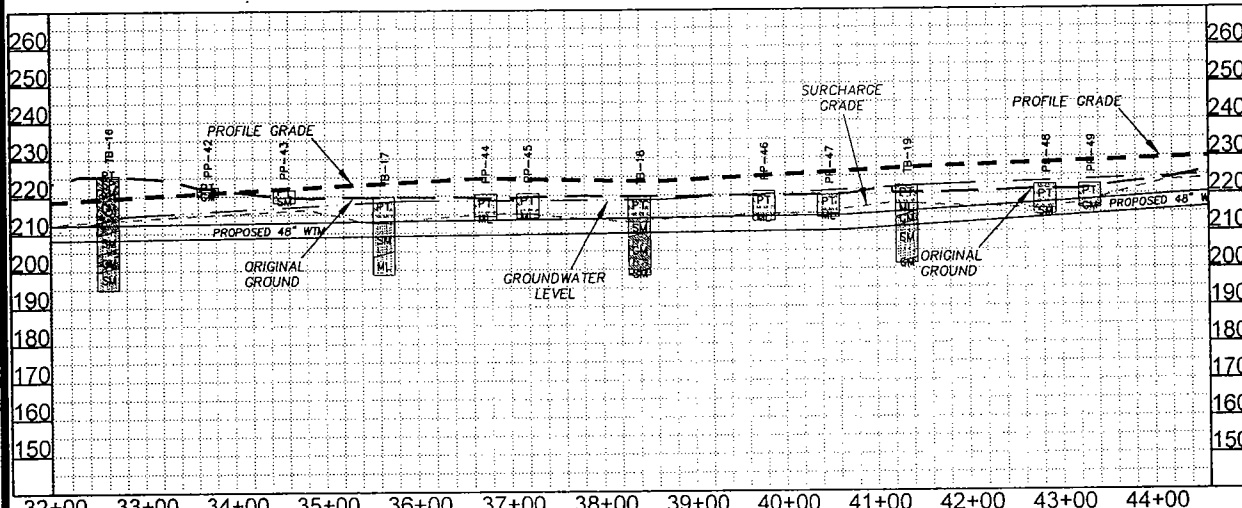
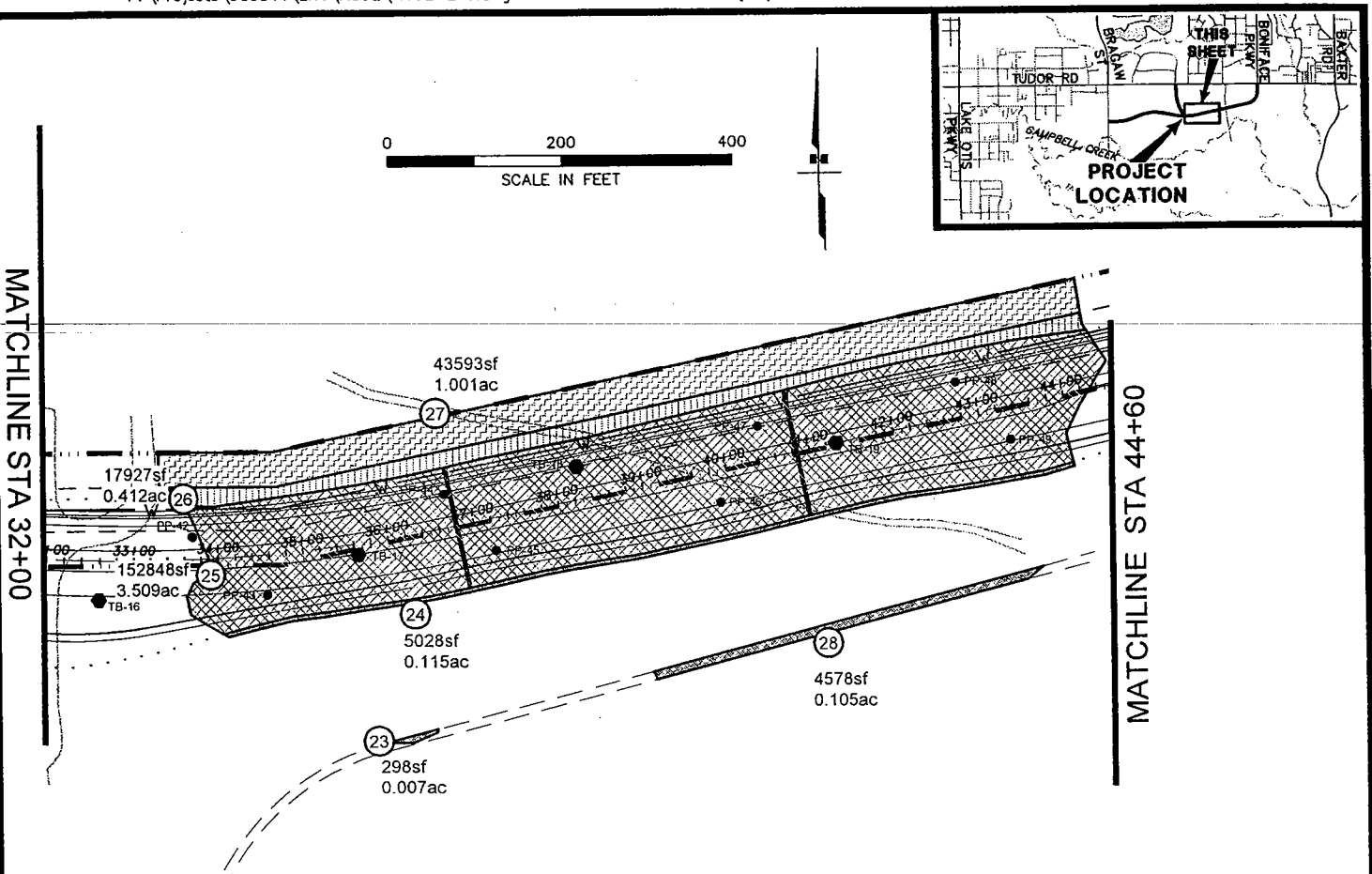
WETLAND IMPACT HATCH PATTERNS

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- AWWU PROPOSED WATER TRANSMISSION LINE TEMPORARY CLEARING LIMIT AREAS

Plan and Profile STA 16+80 - 26+00
NAME: Municipality of Anchorage

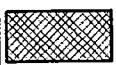



PROJECT: EAST 48th AVENUE/BONIFACE PARKWAY EXTENSION
LOCATION: Sec. 34/35, T13N, R3W, Seward Meridian, Anchorage, Alaska.
WATERBODY: North Fork Campbell Creek

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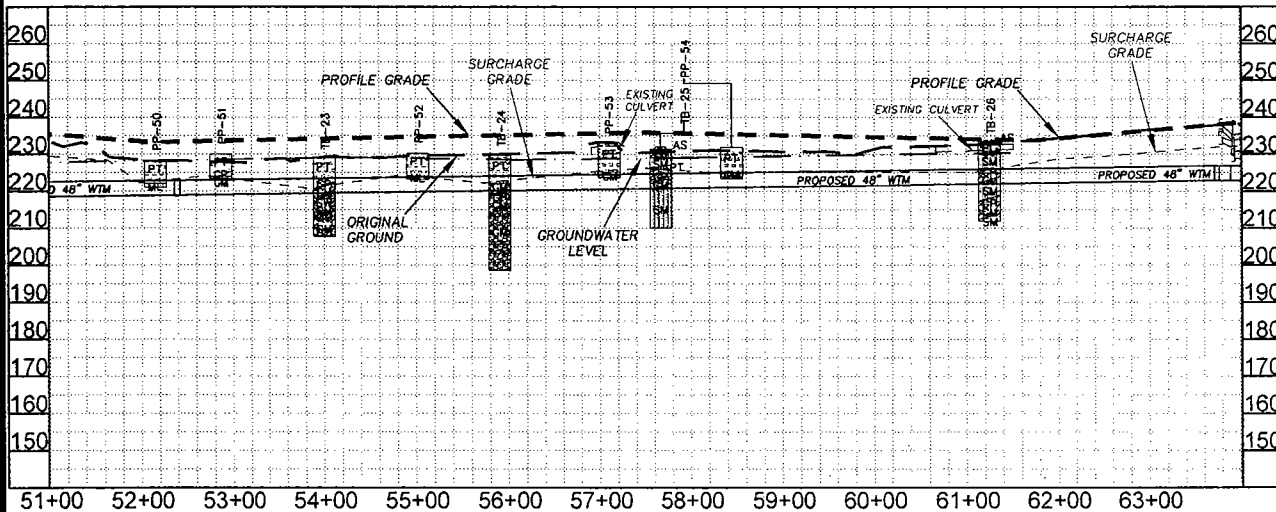
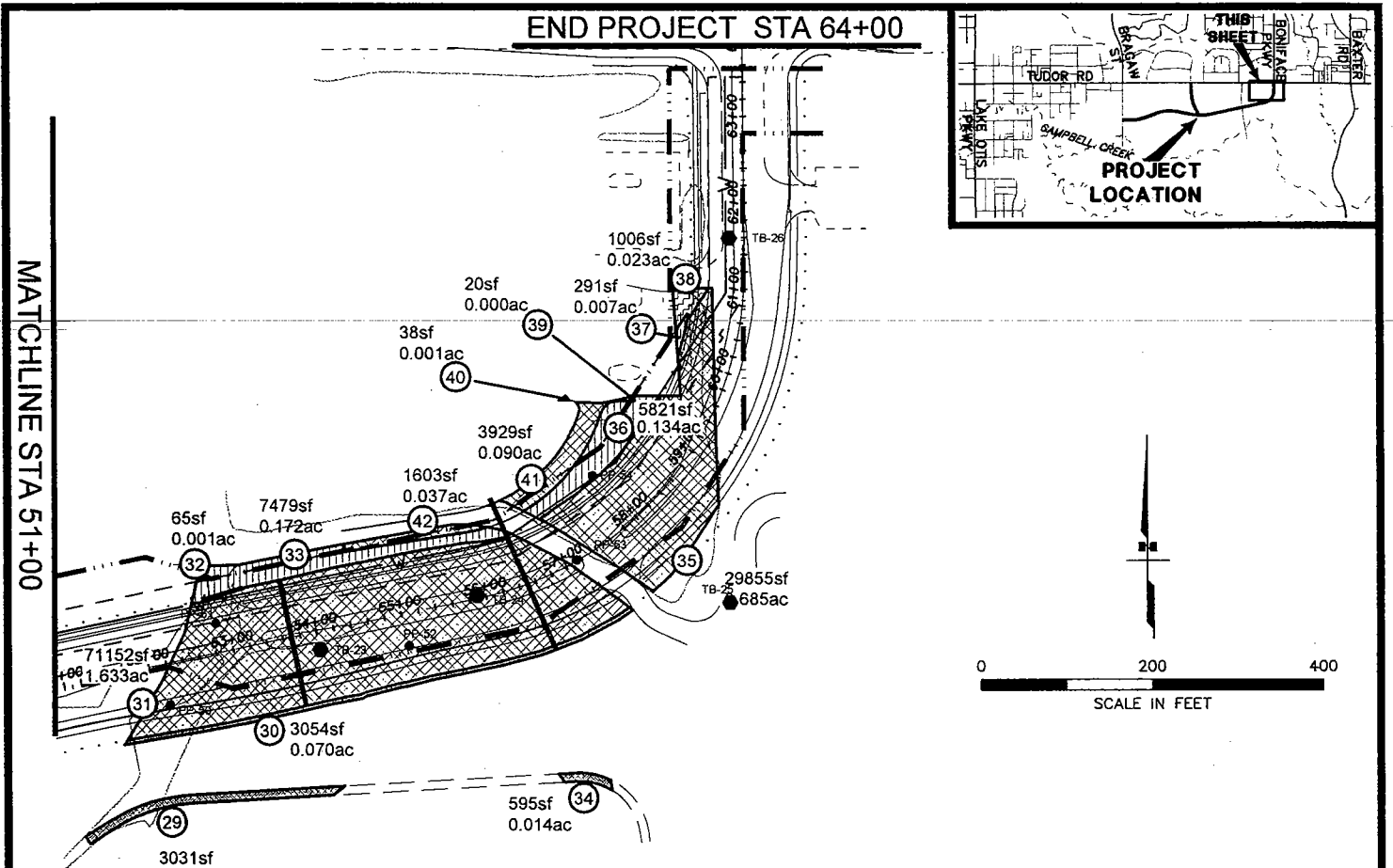
WETLAND IMPACT HATCH PATTERNS

-  EAST 48th AVENUE/BONIFACE PARKWAY EXTENSION AND CAMPBELL CREEK TRAIL PERMANENT WETLAND IMPACT AREAS
-  AWWU WATER TRANSMISSION LINE TEMPORARY SURFACE/PERMANENT SUBSURFACE IMPACT AREAS (OUTSIDE THE PROPOSED ROAD PRISM)
-  PERMANENT WETLAND CLEARING LIMIT AREAS
-  AWWU PROPOSED WATER TRANSMISSION LINE TEMPORARY CLEARING LIMIT AREAS





Plan and Profile STA 32+00 - 44+60
NAME: Municipality of Anchorage
PROJECT: EAST 48th AVENUE/BONIFACE PARKWAY EXTENSION
LOCATION: Sec. 34/35, T13N, R3W, Seward Meridian, Anchorage, Alaska.
WATERBODY: North Fork Campbell Creek

SHEET: 9 of 29

DATE: 04/27/2007



WETLAND IMPACT HATCH PATTERNS

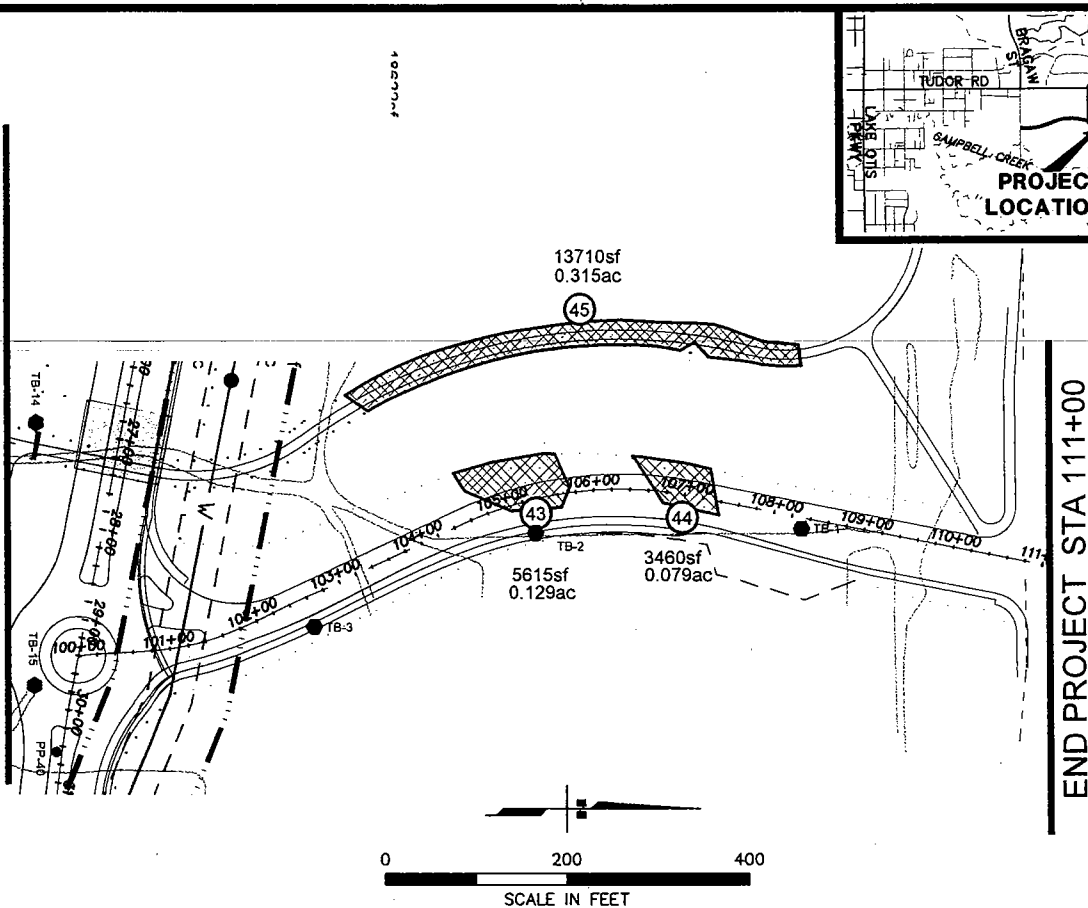
-  EAST 48th AVENUE/BONIFACE PARKWAY EXTENSION AND CAMPBELL CREEK TRAIL PERMANENT WETLAND IMPACT AREAS
-  AWWU WATER TRANSMISSION LINE TEMPORARY SURFACE/PERMANENT SUBSURFACE IMPACT AREAS (OUTSIDE THE PROPOSED ROAD PRISM)
-  PERMANENT WETLAND CLEARING LIMIT AREAS
-  AWWU PROPOSED WATER TRANSMISSION LINE TEMPORARY CLEARING LIMIT AREAS

Plan and Profile STA 51+00 - 64+00
NAME: Municipality of Anchorage

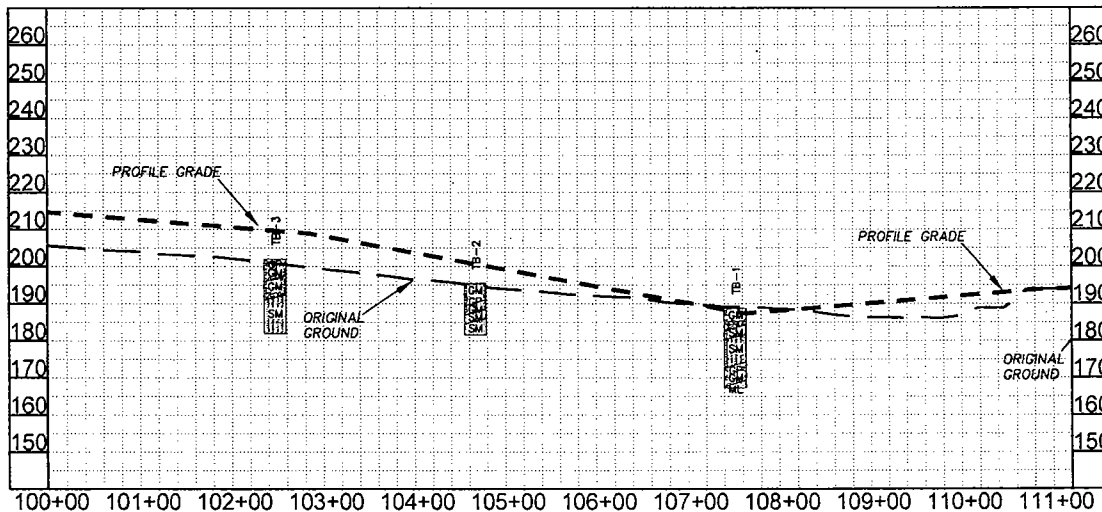
PROJECT: EAST 48th AVENUE/BONIFACE PARKWAY EXTENSION
LOCATION: Sec. 34/35, T13N, R3W, Seward Meridian, Anchorage, Alaska.
WATERBODY: North Fork Campbell Creek

SHEET: 10 of 29 DATE: 04/27/2007





PROJECT BEGINNING STA 100+00



END PROJECT STA 111+00



WETLAND IMPACT HATCH PATTERNS

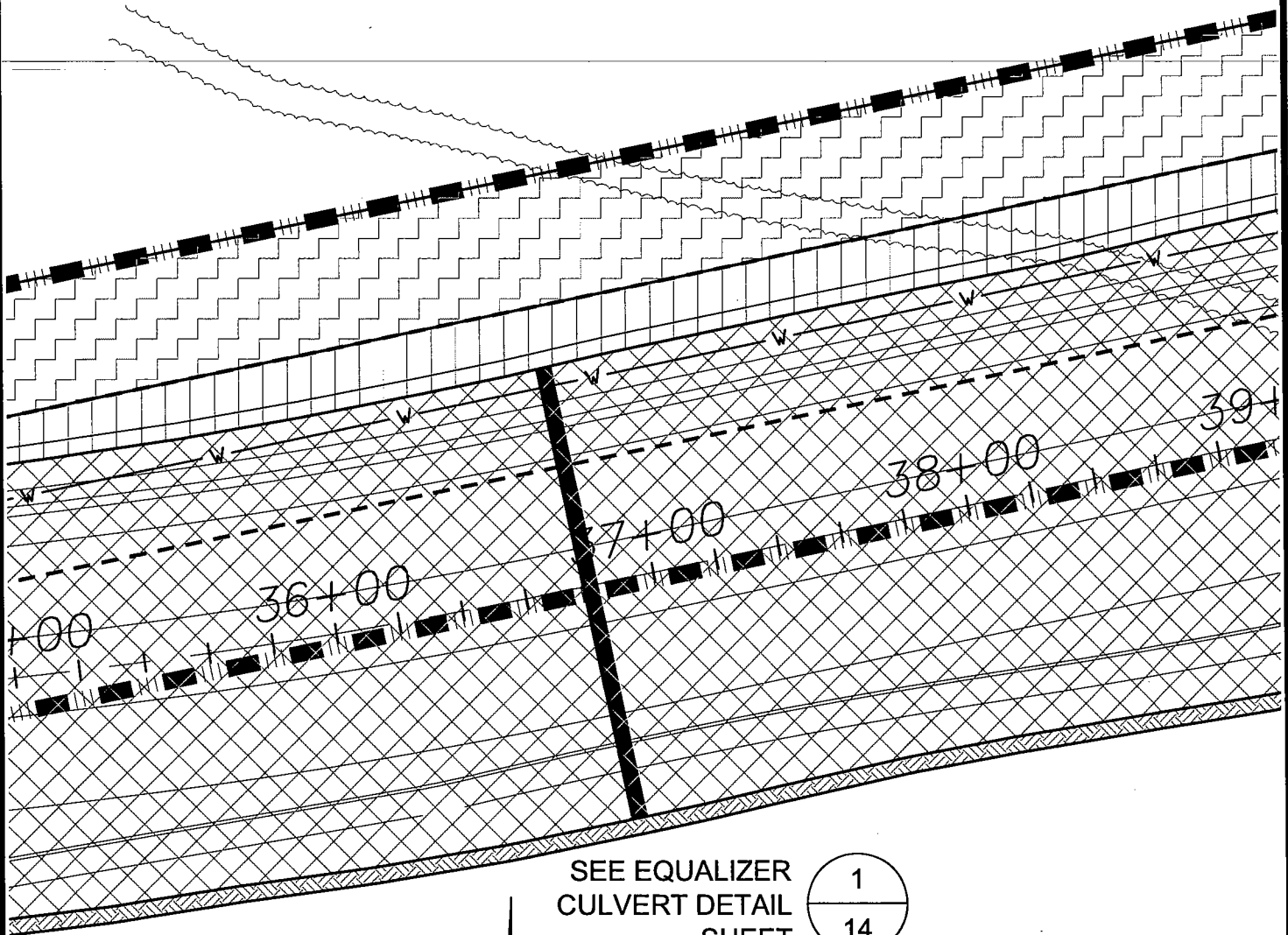
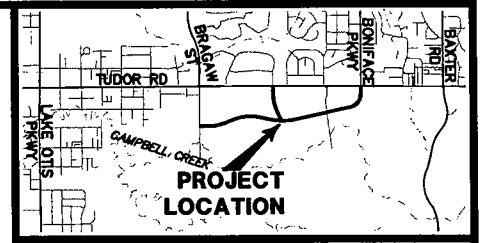
-  EAST 48th AVENUE/BONIFACE PARKWAY EXTENSION AND CAMPBELL CREEK TRAIL PERMANENT WETLAND IMPACT AREAS
-  AWWU WATER TRANSMISSION LINE TEMPORARY SURFACE/PERMANENT SUBSURFACE IMPACT AREAS (OUTSIDE THE PROPOSED ROAD PRISM)
-  PERMANENT WETLAND CLEARING LIMIT AREAS
-  AWWU PROPOSED WATER TRANSMISSION LINE TEMPORARY CLEARING LIMIT AREAS

Tudor Centre Drive STA 100+00 - 111+00
NAME: Municipality of Anchorage

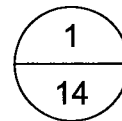
PROJECT: EAST 48th AVENUE/BONIFACE PARKWAY EXTENSION
LOCATION: Sec. 34/35, T13N, R3W, Seward Meridian, Anchorage, Alaska.
WATERBODY: North Fork Campbell Creek

SHEET: 11 of 29

DATE: 04/27/2007



SEE EQUALIZER
CULVERT DETAIL
SHEET



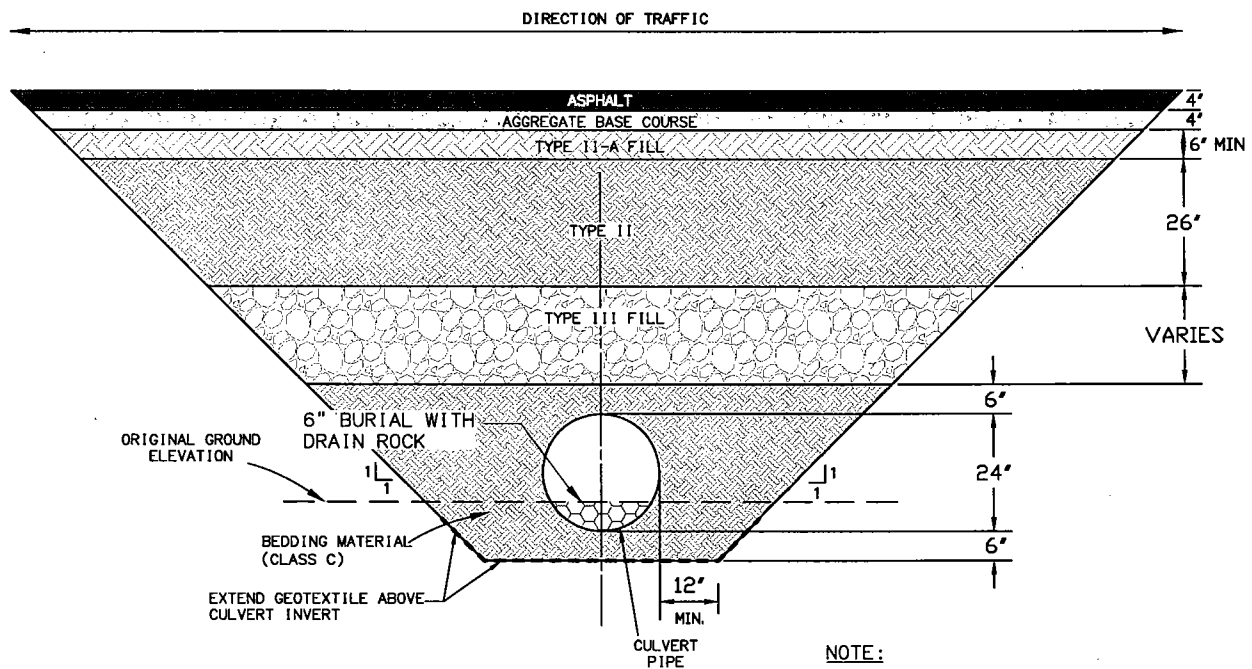
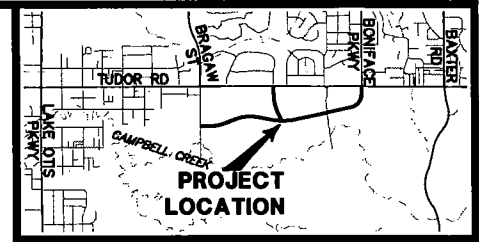
POA-1989-402-R
POA-2004-281-4

0 50 100
SCALE IN FEET



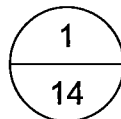
Equalizer Culvert (TYP)
NAME: Municipality of Anchorage
PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION
LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska.
WATERBODY: North Fork Campbell Creek

SHEET: 12 of 29 DATE: 04/27/2007



NOTE:

1. SLOPE OF CULVERT SHALL BE 0.0%
2. BEDDING MATERIAL SHALL BE DRAIN ROCK PER SECTION 20.26.



EQUALIZER CULVERT DETAIL (TYP)

NTS

POA-1989-402-R
POA-2004-281-4

Equalizer Culvert Detail

NAME: Municipality of Anchorage

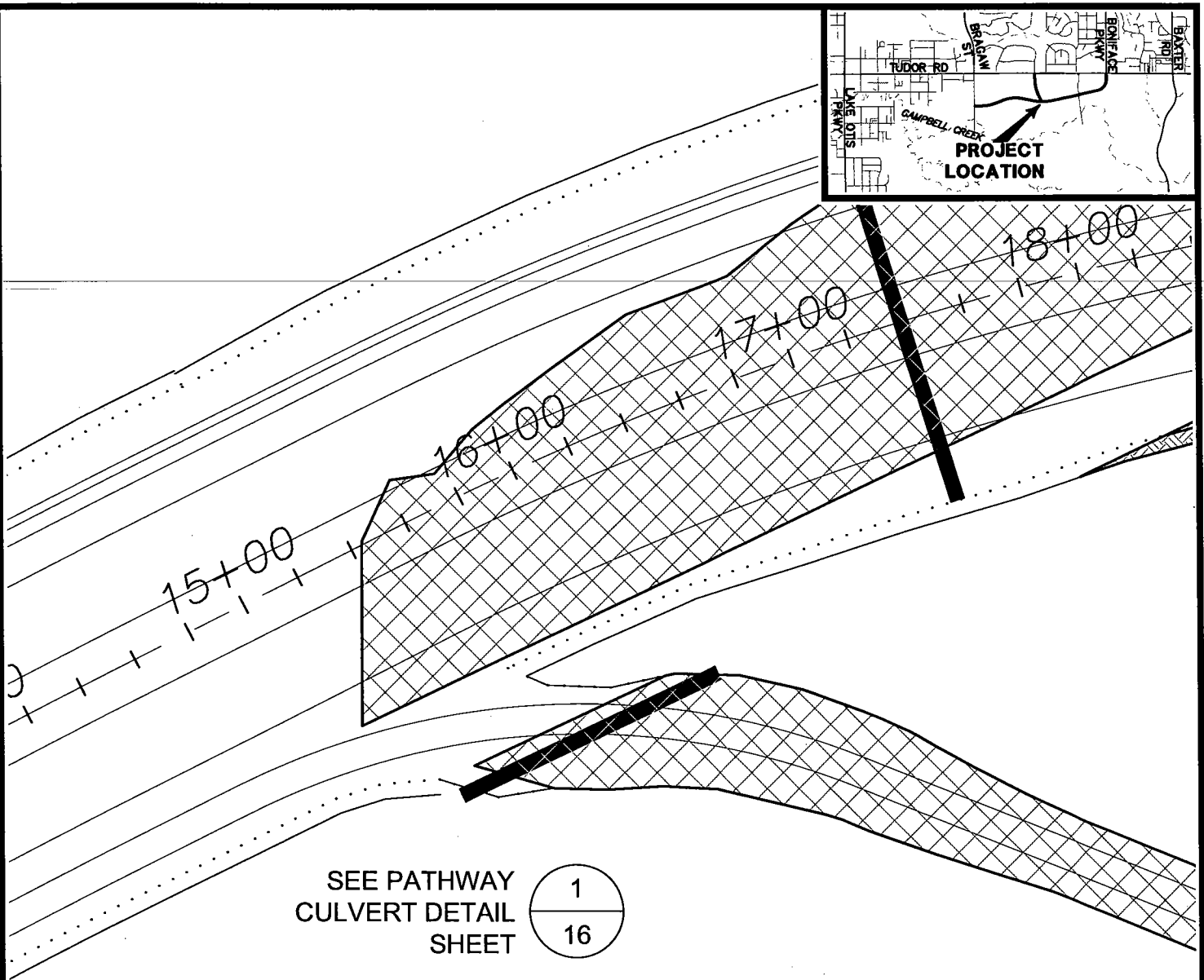
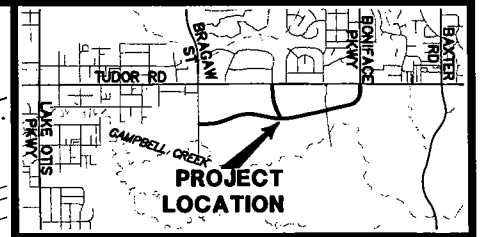
PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION

LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska.

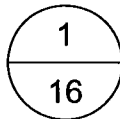
WATERBODY: North Fork Campbell Creek

SHEET: 13 of 29

DATE: 02/25/2007



SEE PATHWAY
CULVERT DETAIL
SHEET



0 50 100
SCALE IN FEET

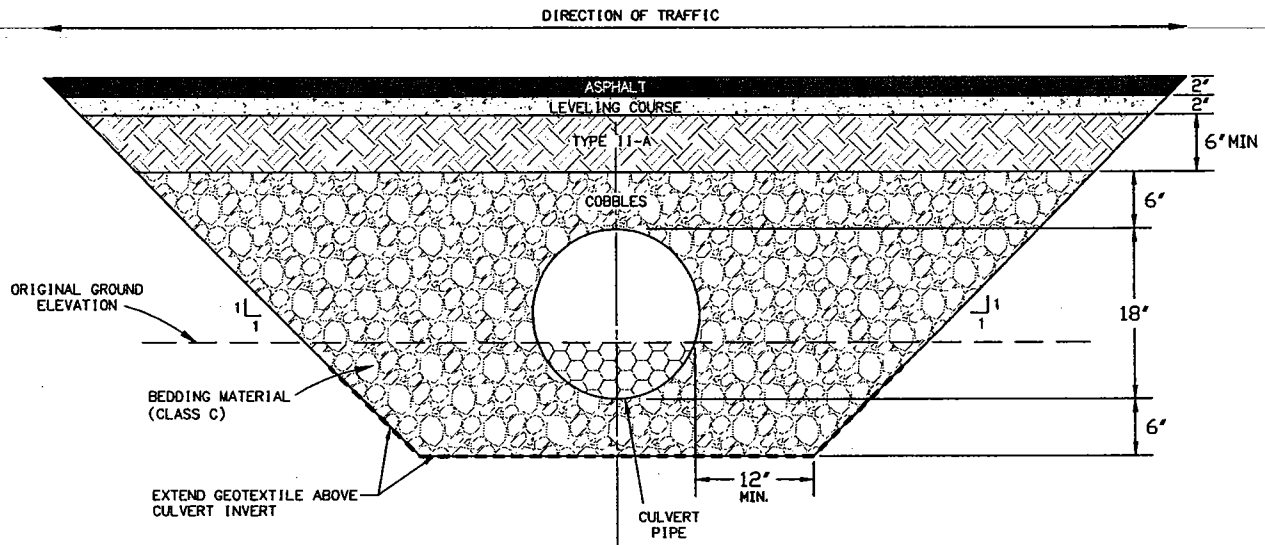
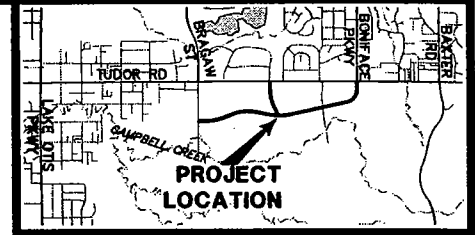


POA-1989-402-R
POA-2004-281-4

Pathway Culvert
NAME: Municipality of Anchorage
PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION
LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska.
WATERBODY: North Fork Campbell Creek

SHEET: 14 of 29

DATE: 04/27/2007



1
16

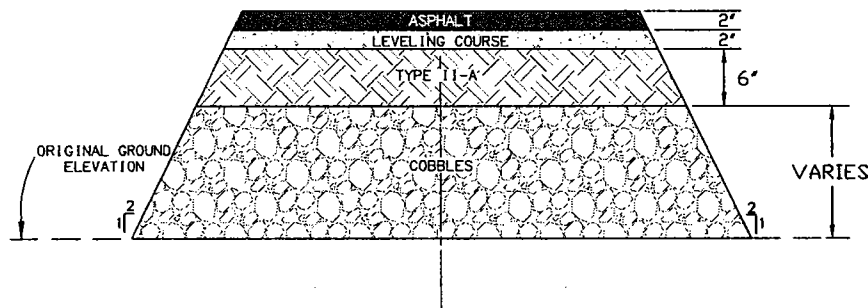
PATHWAY CULVERT DETAIL (TYP)

NTS

NOTE:

1. DRAINAGE WILL ALSO BE PROVIDED THROUGH PATHWAY BASE VIA COBBLES. SEE DETAIL 2

2
16



2
16

PATHWAY DETAIL (TYP)

NTS

POA-1989-402-R
POA-2004-281-4

Pathway Culvert Detail (TYP)
NAME: Municipality of Anchorage

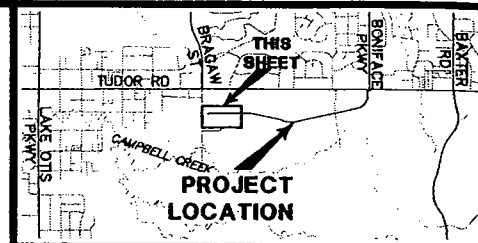
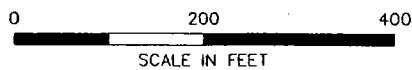
PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION

LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska.

WATERBODY: North Fork Campbell Creek

SHEET: 15 of 29

DATE: 02/25/2007



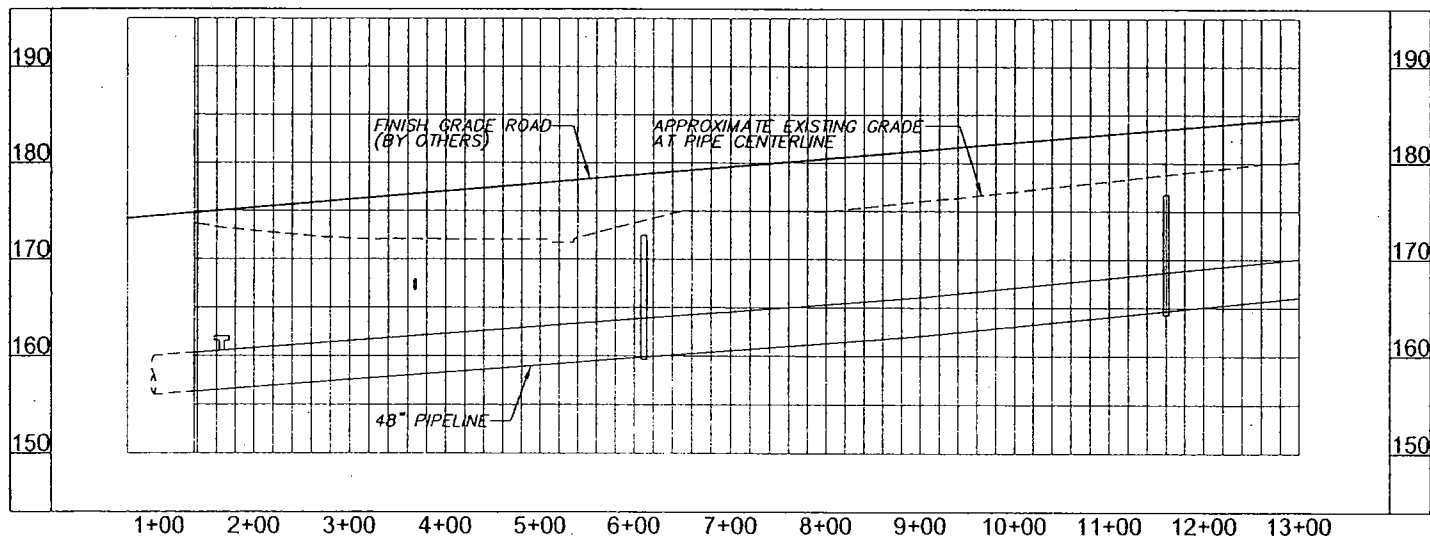
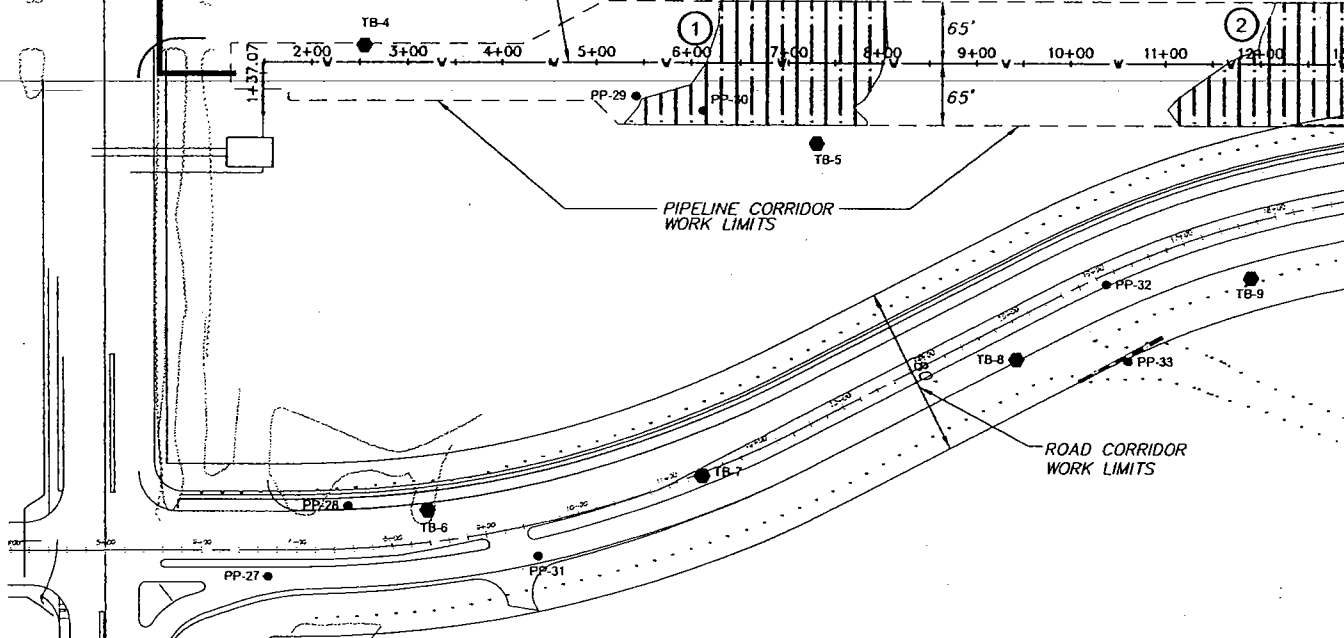
WATERLINE
PROJECT BEGINING
STA 1+37.07

CENTERLINE 48" WATERLINE

25649.50 sf
0.589 ac

32511.61 sf
0.746 ac

MATCHLINE
STA 13+00



WETLAND IMPACT HATCH PATTERNS



AWWU WATER TRANSMISSION LINE TEMPORARY
SURFACE/PERMANENT SUBSURFACE IMPACT AREAS (OUTSIDE
THE PROPOSED ROAD PRISM)



AWWU PROPOSED WATER TRANSMISSION LINE
AND ROAD OVERLAP AREAS

POA-1989-402-R
POA-2004-281-4

Plan and Profile STA 1+37.07 TO STA 13+00

NAME: Municipality of Anchorage

Waterline Specific, here forward

PROJECT: EAST 48th AVENUE

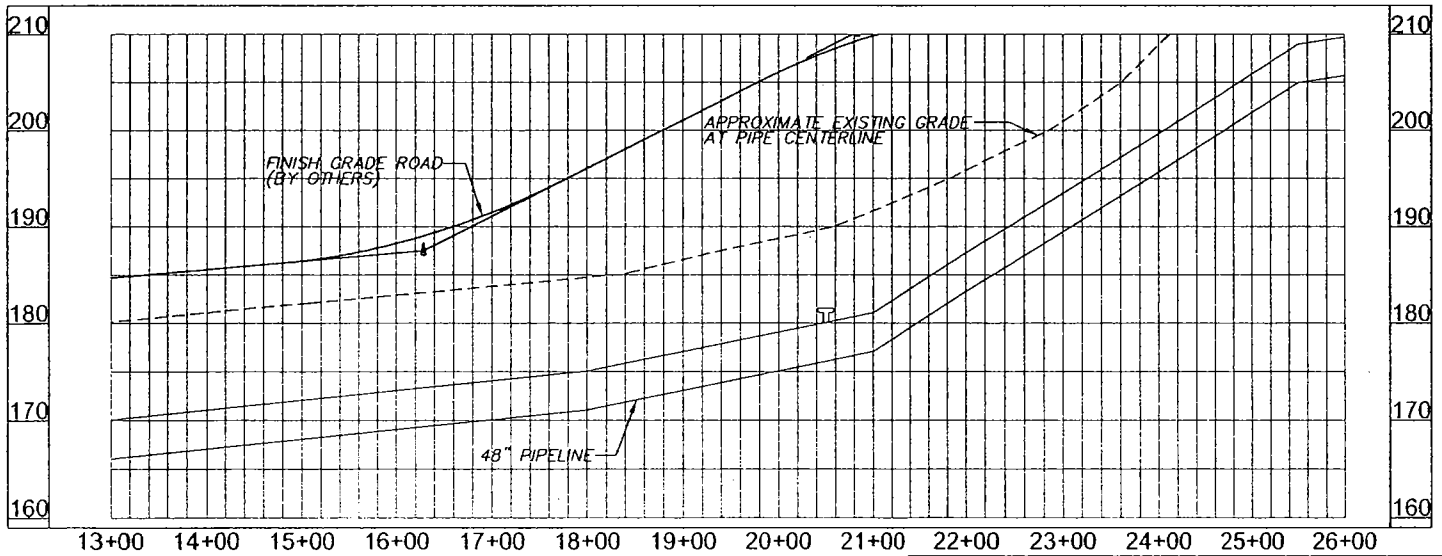
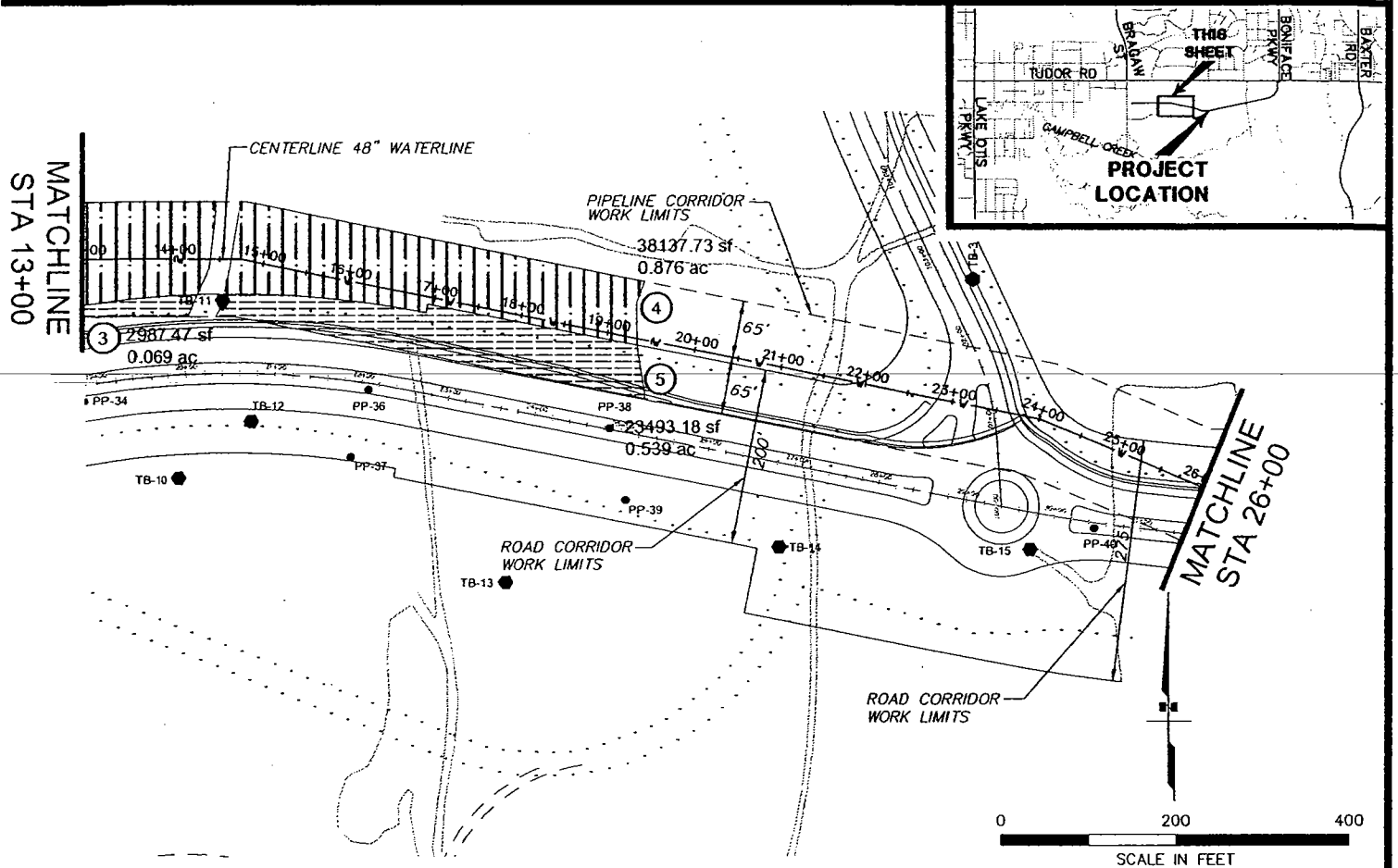
EXTENSION SEGMENT

LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska.

WATERBODY: North Fork Campbell Creek

SHEET: 16 of 29

DATE: 04/12/2007



WETLAND IMPACT HATCH PATTERNS

- AWWU WATER TRANSMISSION LINE TEMPORARY SURFACE/PERMANENT SUBSURFACE IMPACT AREAS (OUTSIDE THE PROPOSED ROAD PRISM)
- AWWU PROPOSED WATER TRANSMISSION LINE AND ROAD OVERLAP AREAS

POA-1989-402-R
POA-2004-281-4

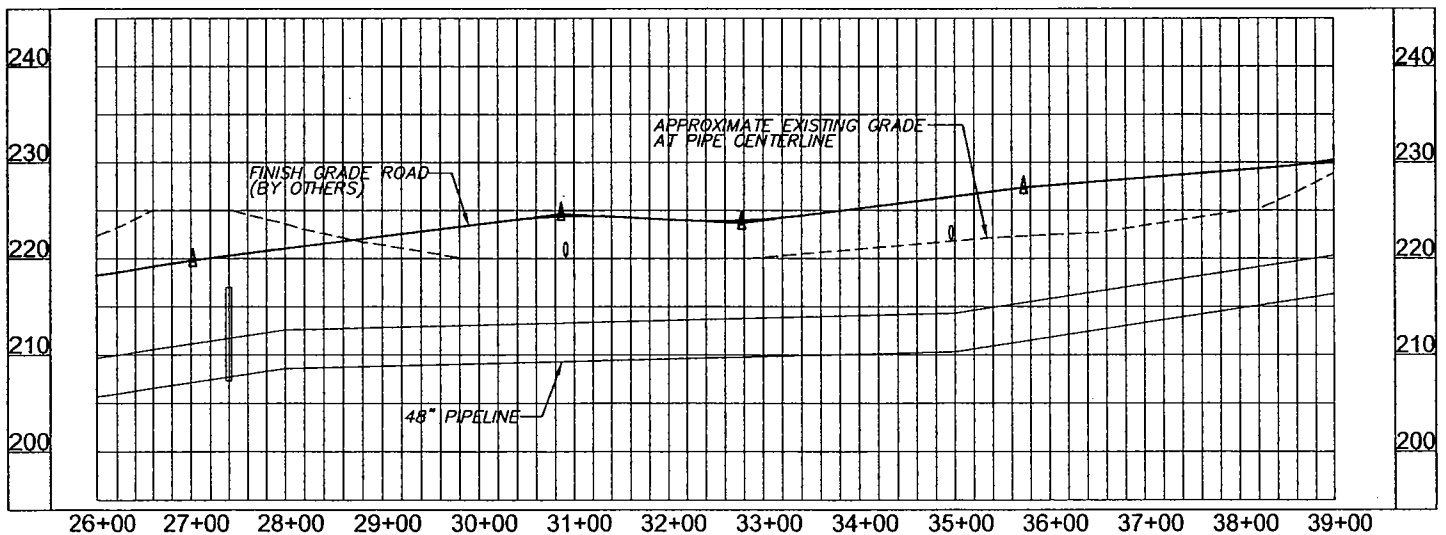
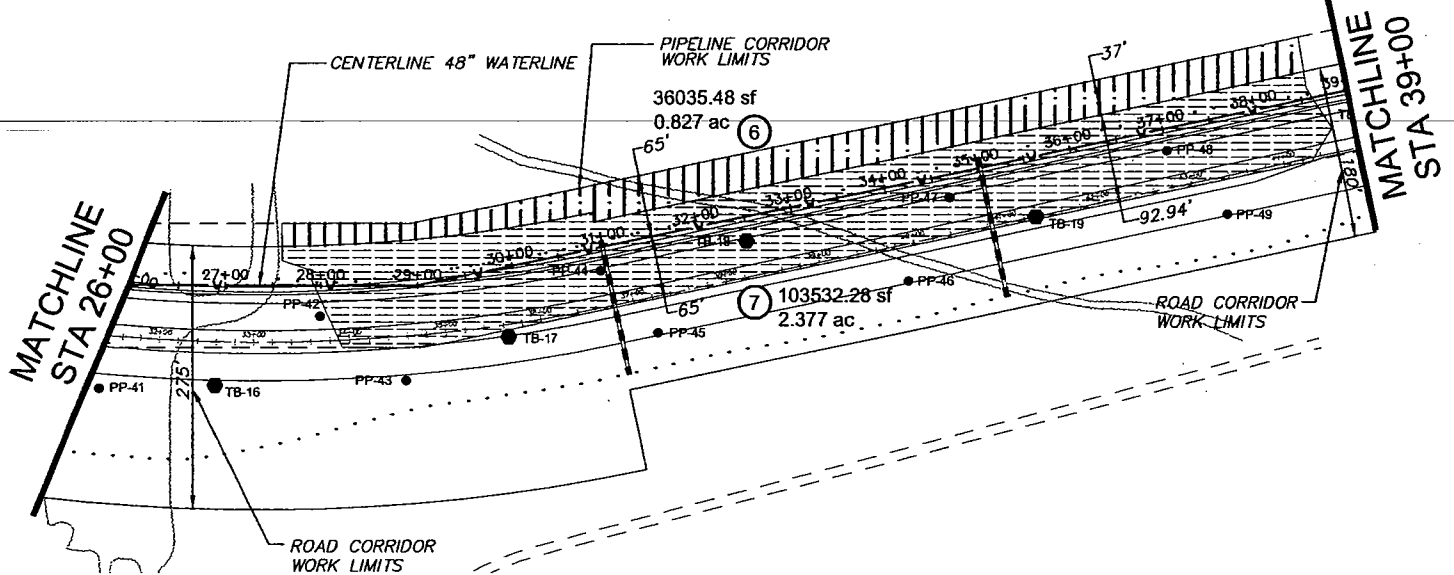
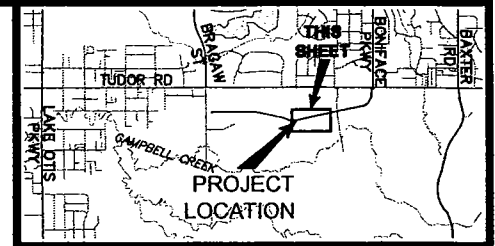
Plan and Profile STA 13+00 TO STA 26+00
NAME: Municipality of Anchorage

PROJECT: EAST 48th AVENUE
EXTENSION SEGMENT
LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska.
WATERBODY: North Fork Campbell Creek

SHEET: 17 of 29

DATE: 04/12/2007

0 200 400
SCALE IN FEET



WETLAND IMPACT HATCH PATTERNS

AWWU WATER TRANSMISSION LINE TEMPORARY SURFACE/PERMANENT SUBSURFACE IMPACT AREAS (OUTSIDE THE PROPOSED ROAD PRISM)

AWWU PROPOSED WATER TRANSMISSION LINE AND ROAD OVERLAP AREAS

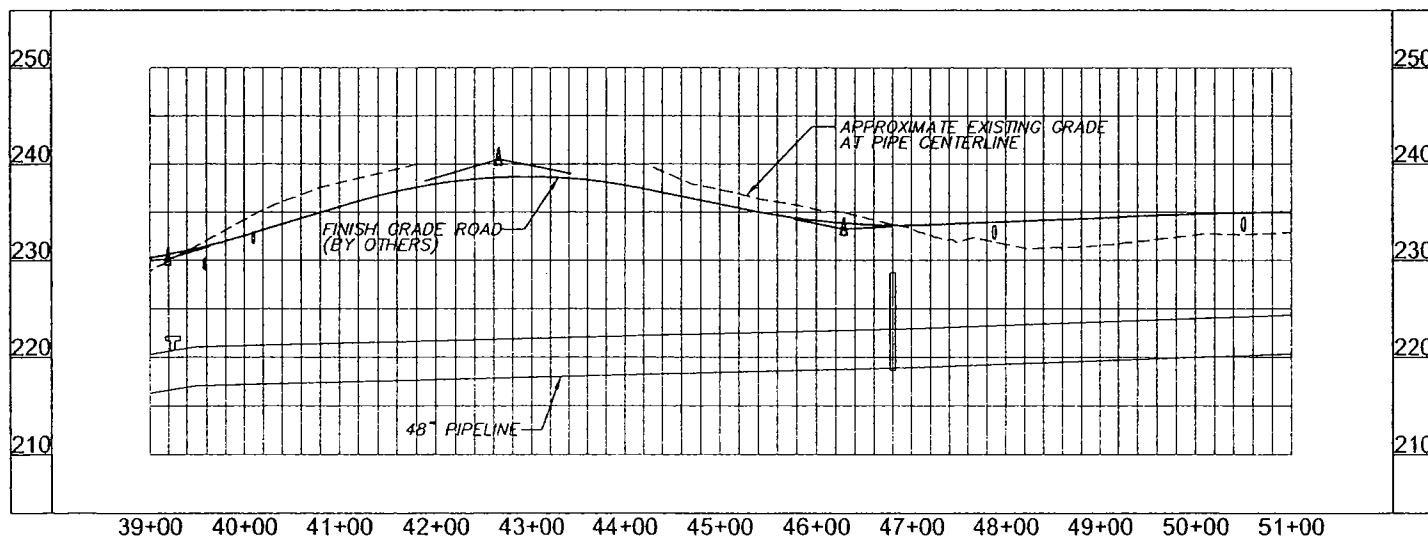
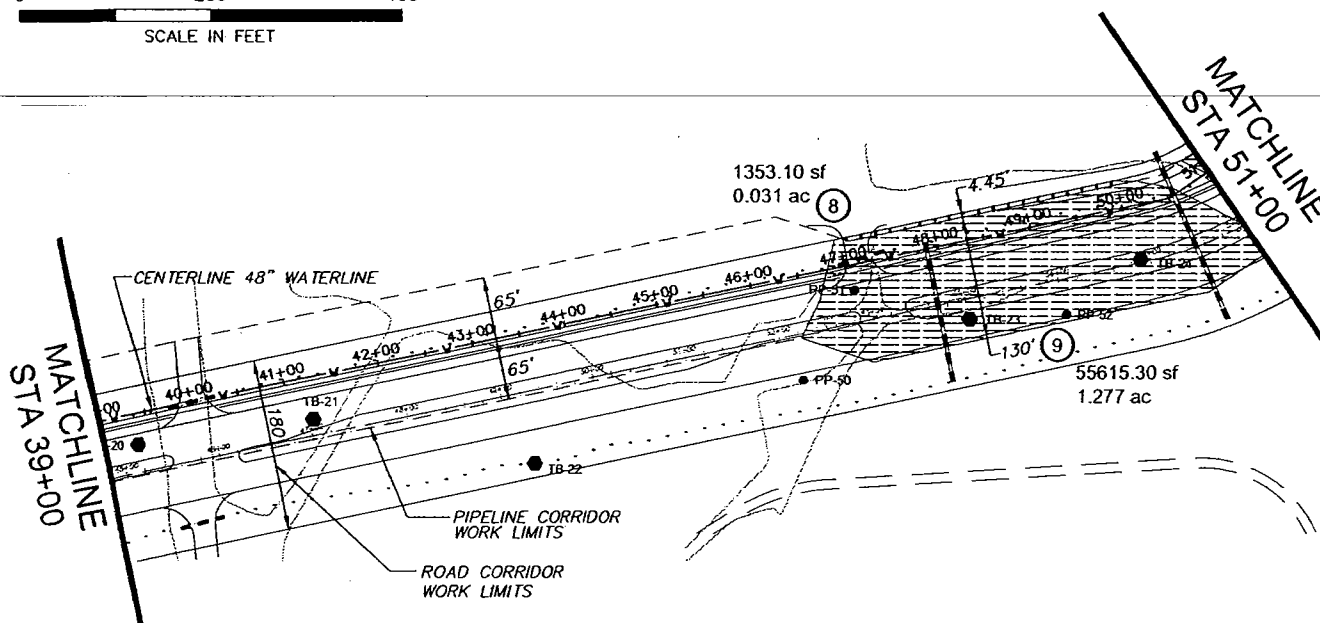
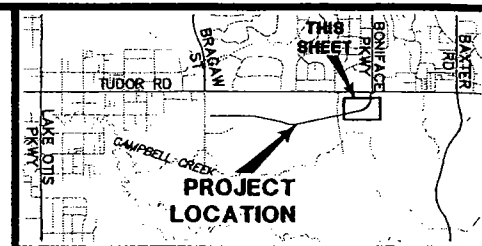
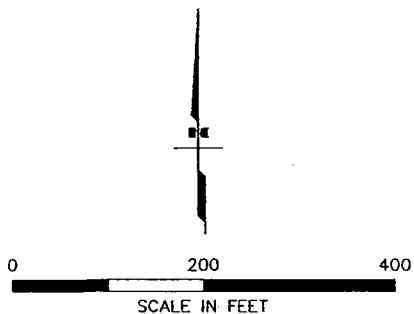
POA-1989-402-R
POA-2004-281-4

Plan and Profile STA 26+00 TO STA 39+00
NAME: Municipality of Anchorage

PROJECT: EAST 48th AVENUE
EXTENSION SEGMENT
LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska.
WATERBODY: North Fork Campbell Creek

SHEET: 18 of 29

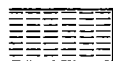
DATE: 04/12/2007



WETLAND IMPACT HATCH PATTERNS



AWWU WATER TRANSMISSION LINE TEMPORARY
SURFACE/PERMANENT SUBSURFACE IMPACT AREAS (OUTSIDE
THE PROPOSED ROAD PRISM)



AWWU PROPOSED WATER TRANSMISSION LINE
AND ROAD OVERLAP AREAS

POA-1989-402-R
POA-2004-281-4

Plan and Profile STA 39+00 TO STA
NAME: Municipality of Anchorage

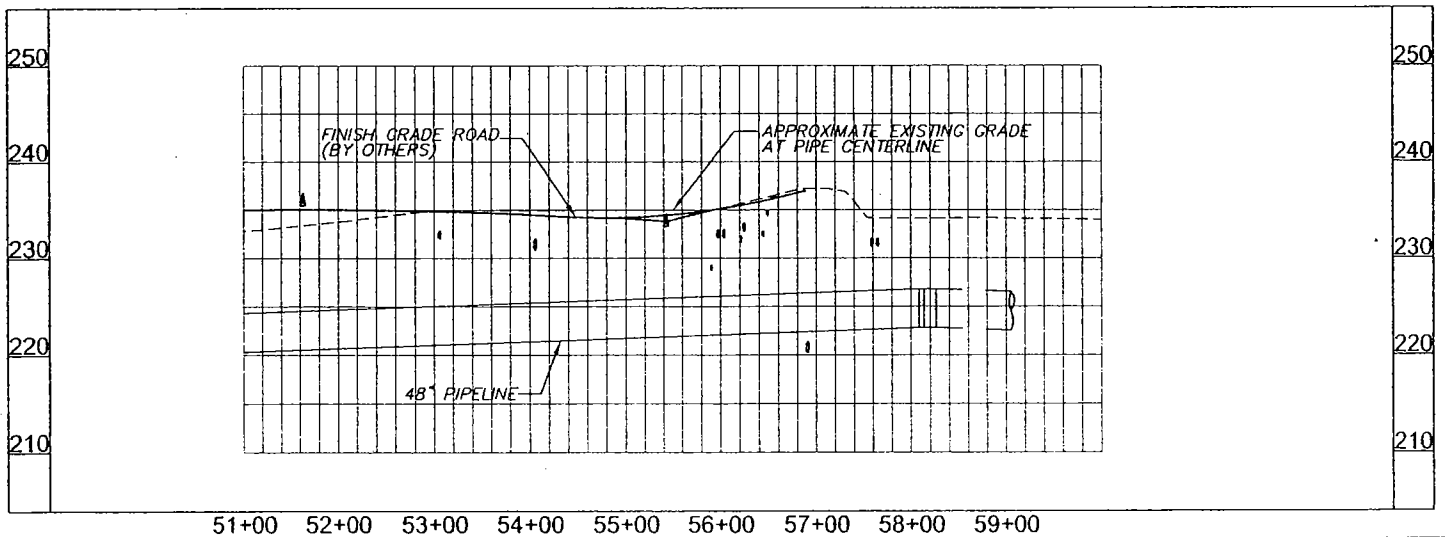
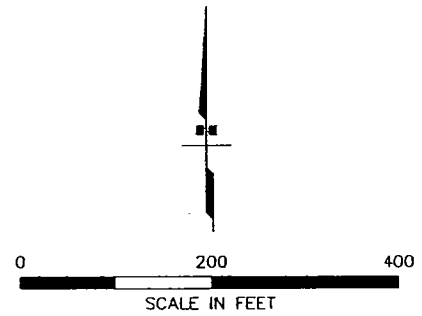
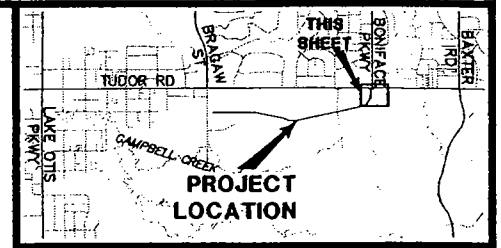
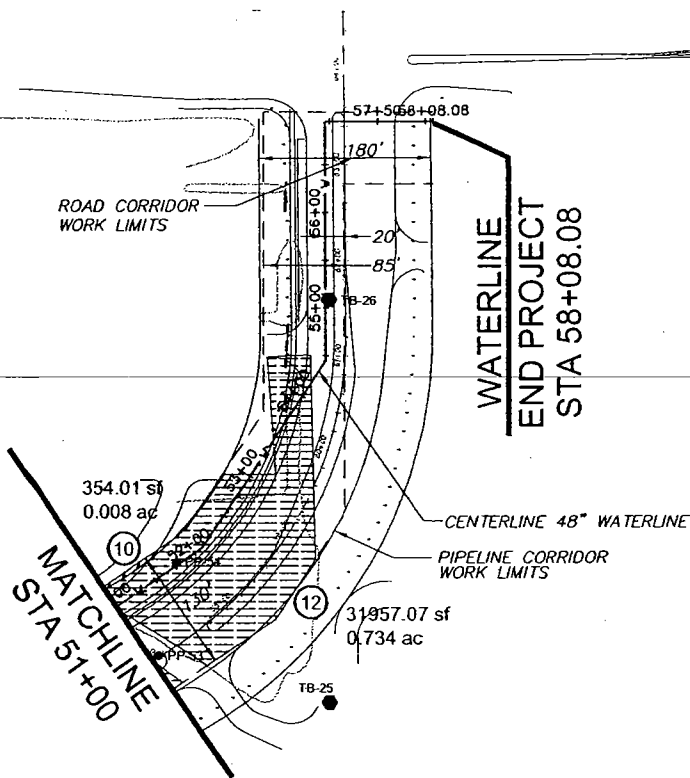
PROJECT: EAST 48th AVENUE
EXTENSION SEGMENT

LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska.

WATERBODY: North Fork Campbell Creek

SHEET: 19 of 29

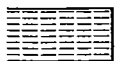
DATE: 04/12/2007



WETLAND IMPACT HATCH PATTERNS



AWWU WATER TRANSMISSION LINE TEMPORARY
SURFACE/PERMANENT SUBSURFACE IMPACT AREAS (OUTSIDE
THE PROPOSED ROAD PRISM)



AWWU PROPOSED WATER TRANSMISSION LINE
AND ROAD OVERLAP AREAS

POA-1989-402-R
POA-2004-281-4

Plan and Profile STA 39+00 TO STA 58+08.08
NAME: Municipality of Anchorage

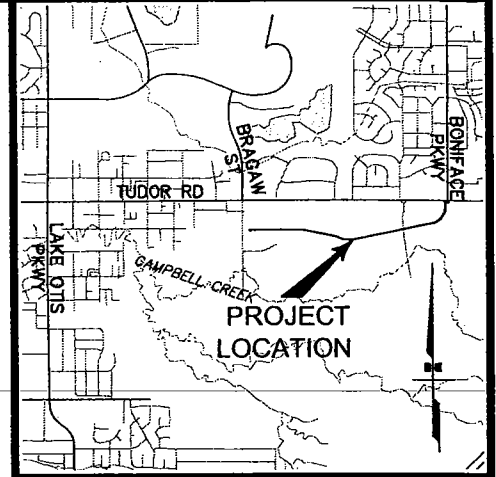
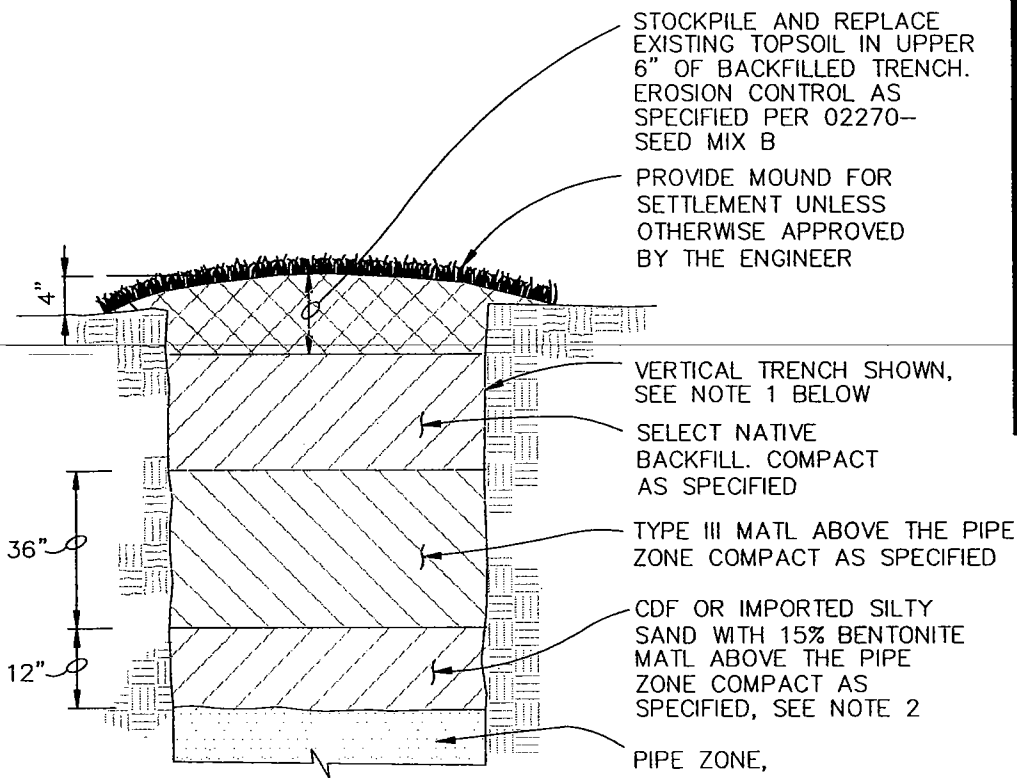
PROJECT: EAST 48th AVENUE
EXTENSION SEGMENT

LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska.

WATERBODY: North Fork Campbell Creek

SHEET: 20 of 29

DATE: 04/12/2007



BACKFILL WILL GENERALLY BE USED IN WETLAND AREAS TO BE FILLED IN A LATER ROAD PROJECT BY OTHERS.

CLASS (G2)

PROPORTION SEED	BY WEIGHT	PURITY	GERMINATION
Northern Tufted Hairgrass, (Deschampsia caespitosa)	25%	85%	75%
Arctared Rescue, (Festuca rubra)	25%	95%	85%
Alyeska Polargrass, (Arctagrostis latifolia)	10%	90%	85%
American Sloughgrass, (Beckmania syzigachne)	20%	75%	85%
Beaked Sedge, (Cares rostrata)	10%	85%	85%
Water Sedge, (Carex aquatillis)	10%	85%	85%

POA-1989-402-R
POA-2004-281-4

Trench Backfill and Surface Restoration Detail
NAME: Municipality of Anchorage

PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION

LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska

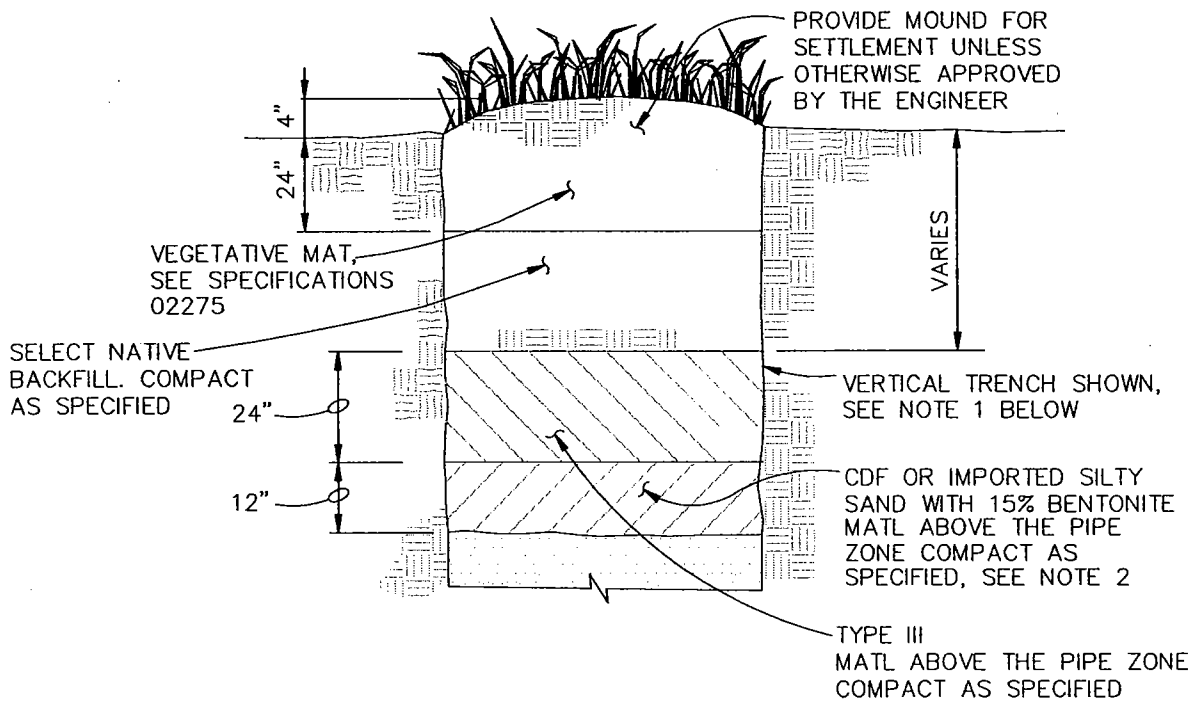
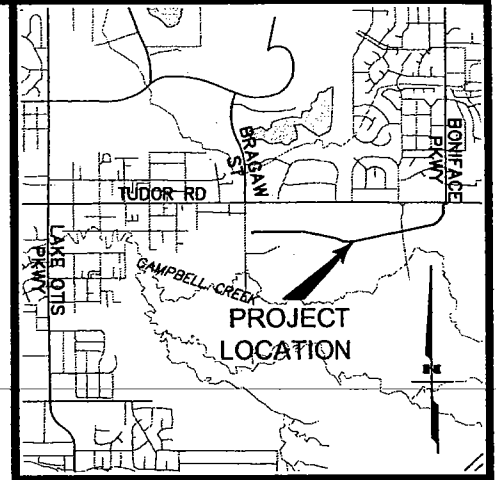
WATERBODY: North Fork Campbell Creek

SHEET: 21 of 29

DATE: 04/12/2007

NOTES:

- CONTRACTOR SHALL DETERMINE AND PROVIDE SLOPED TRENCH WALLS OR SHORED EXCAVATIONS AS REQUIRED
- FOR CONSTRUCTION AND SAFETY IN ACCORDANCE WITH CURRENT FEDERAL, STATE, AND LOCAL REQUIREMENTS. DRY BENTONITE SHALL NOT BE USED. BENTONITE, SAND, AND WATER SHALL BE PREMIXED IN A PUGMILL AT 2%-4% OVER OPTIMUM MOISTURE CONTENT.



BACKFILL WILL GENERALLY BE USED IN WETLAND AREAS. PROVIDE TEMPORARY MOOSE FENCE SURROUNDING CLASS W PLANTED AREAS PER SPEC. SECTION 02275.

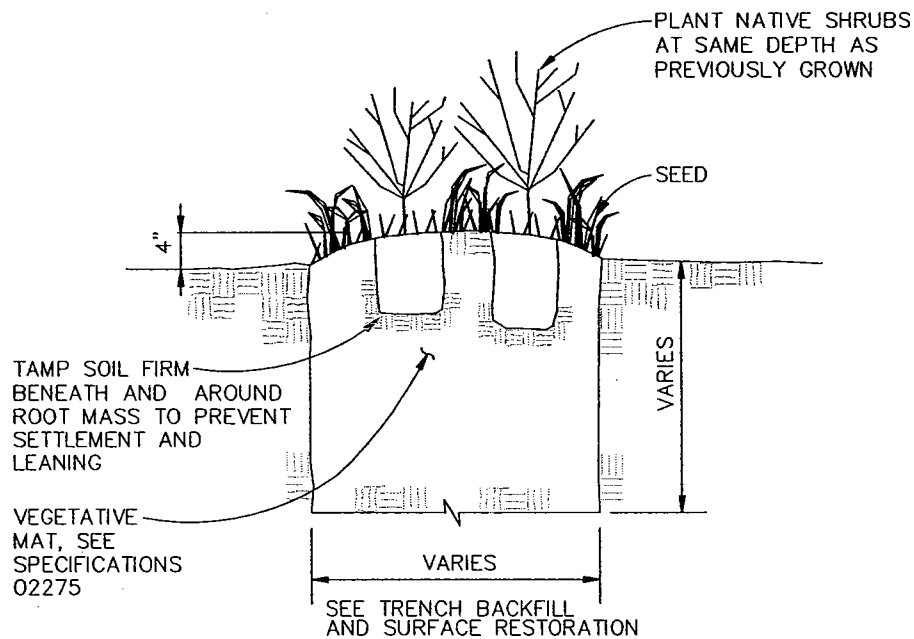
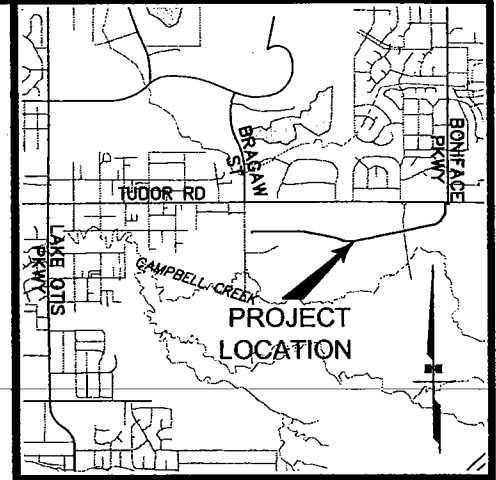
POA-1989-402-R
POA-2004-281-4

CLASS (W)

NOTES:

1. CONTRACTOR SHALL DETERMINE AND PROVIDE SLOPED TRENCH WALLS OR SHORED EXCAVATIONS AS REQUIRED
2. FOR CONSTRUCTION AND SAFETY IN ACCORDANCE WITH CURRENT FEDERAL, STATE, AND LOCAL REQUIREMENTS. DRY BENTONITE SHALL NOT BE USED. BENTONITE, SAND, AND WATER SHALL BE PREMIXED IN A PUGMILL AT 2%-4% OVER OPTIMUM MOISTURE CONTENT.

Trench Backfill and Surface Restoration Detail
for Class B Wetlands: *Outside road prism*
NAME: Municipality of Anchorage
PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION
LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska
WATERBODY: North Fork Campbell Creek
SHEET: 22 of 29 DATE: 04/12/2007



POA-1989-402-R
POA-2004-281-4

Native Planting Detail for Class C Wetlands
NAME: Municipality of Anchorage

PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION

LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska

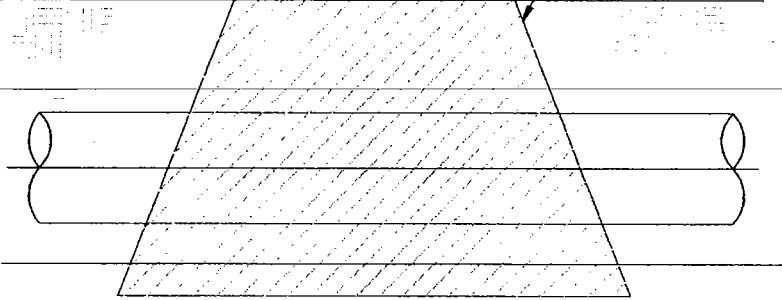
WATERBODY: North Fork Campbell Creek

SHEET: 23 of 29 DATE: 04/12/2007

TOP AS INDICATED
ON PLAN AND
PROFILE SHEETS

4'-0"
MIN

SLOPE AS
REQUIRED TO
CONSTRUCT



ELEVATION

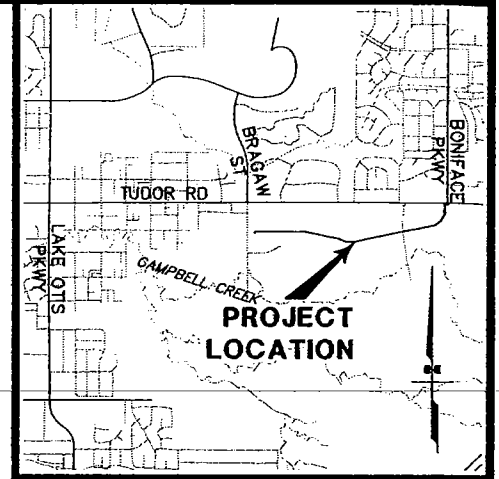
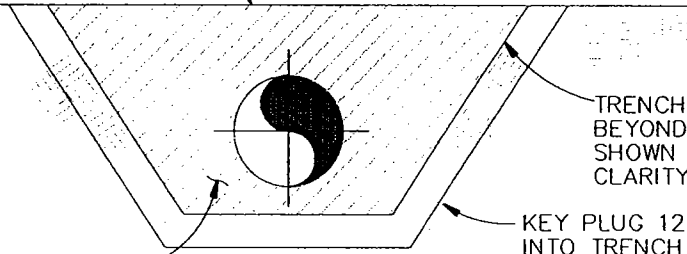
TOP AS INDICATED
ON PLAN AND
PROFILE SHEETS

REPLACE PIPE ZONE
MATERIAL WITH SILTY SAND
WITH 15% BENTONITE OR CDF.
SEE NOTE 1

SECTION

TRENCH WALL
BEYOND PLUG,
SHOWN FOR
CLARITY

KEY PLUG 12"
INTO TRENCH
WALLS - THREE
SIDES



NOTE:

1. DRY BENTONITE SHALL NOT BE USED FOR THE TRENCH PLUG. BENTONITE, SAND AND WATER SHALL BE PREMIXED IN A PUGMILL AT 2%-4% OVER OPTIMUM MOISTURE CONTENT.
2. USE HEATED WATER AS REQUIRED FOR BENTONITE, SAND MIX, OR CDF MIX TO PREVENT FREEZING DURING WINTER CONSTRUCTION.

POA-1989-402-R
POA-2004-281-4

Trench Plug Detail

NAME: Municipality of Anchorage

PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION

LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska

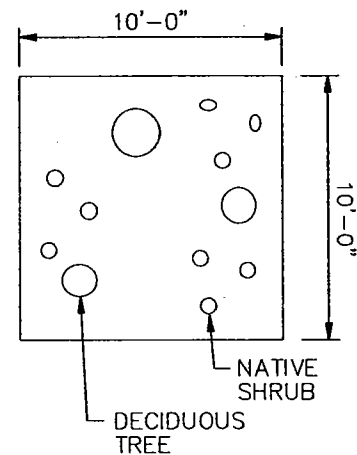
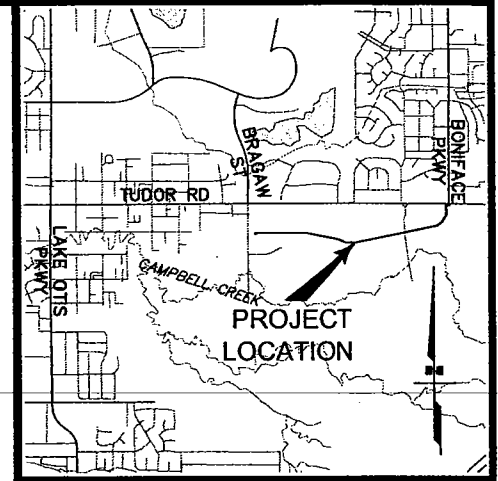
WATERBODY: North Fork Campbell Creek

SHEET: 24 of 29

DATE: 04/12/2007

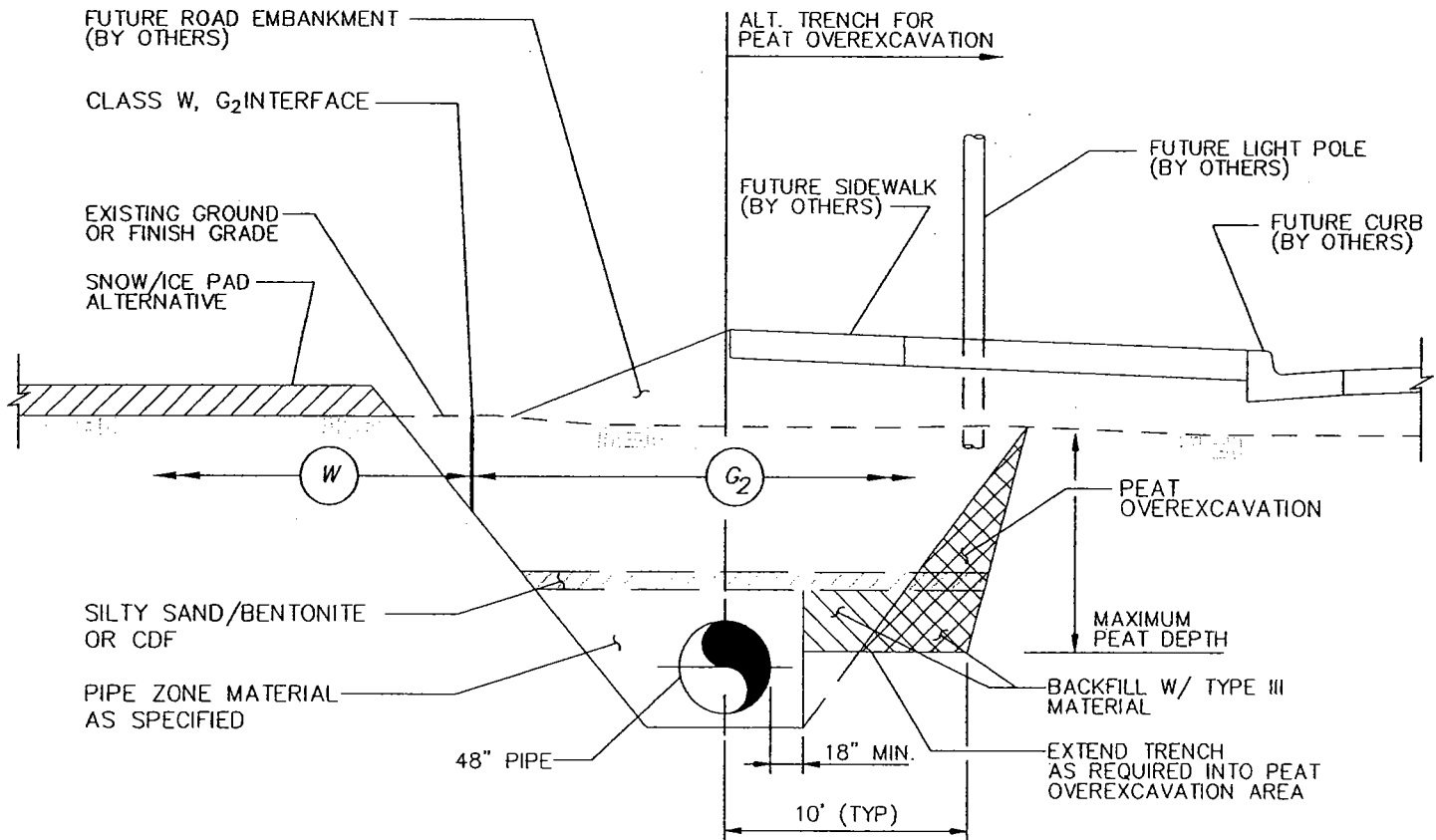
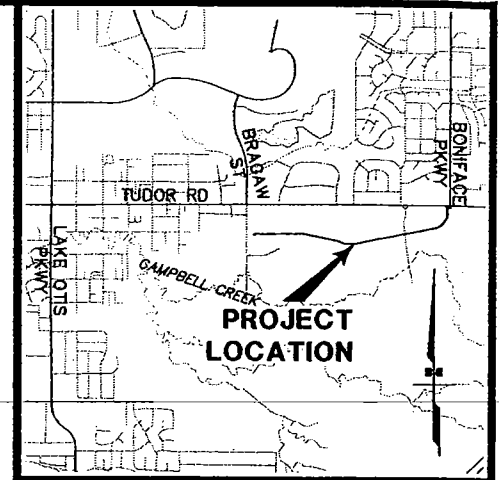
NOTES:

1. DO NOT PLANT SHRUB(S) WITHIN 5 HORIZONTAL FEET OF PIPE CENTERLINE.
2. THIS DETAIL REPRESENTS A TYPICAL 100 SQ FT WETLAND PLANT RESTORATION AREA. SIMILAR PLANTING SHALL BE COMPLETED OVER ENTIRE CLASS W SURFACE RESTORATION AREAS WHERE SPECIFIED.
3. SHRUBS SHALL BE PLANTED IN ON-SITE NATIVE SOIL SALVAGED AND STOCKPILED FROM THE TOP 24" OR DEEPER ORGANIC LAYER.
4. APPLY SEED MIX B PER SPEC. SECTION 02275 BY HAND BETWEEN SHRUBS.
5. PLANT SHRUBS AND TREES AT THE SAME DEPTH AS PREVIOUSLY GROWING.
6. PLANT 3 SHRUBS - 1 GALLON CONTAINER OR 18"-24" MINIMUM SIZE
 - 2 DWARF BIRCH
 - 1 THIN LEAF ALDER
7. PLANT 9 NATIVE SHRUBS, 1 GALLON CONTAINER OR 18"-24" MINIMUM SIZE, ANY ONE SPECIES NOT MORE THAN 1/3 TOTAL:
 - WILLOW SPECIES
 - CINQUEFOIL
 - ROSE
 - HIGHBUSH CRANBERRY
 - RUSTY MENSIA
 - BEAUVERD SPIREA
8. FOR PLANTING, SEE NATURAL PLANTING DETAIL.
9. THE CONTRACTOR SHALL SALVAGE ALL DWARF BIRCH ALONG THE PIPELINE CORRIDOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER AT COMPLETION OF SALVAGE OPERATION. THE SALVAGED DWARF BIRCH SHALL BE REPLANTED IN THE DESIGNATED WETLAND AREAS. CONTRACTOR SHALL SUPPLEMENT REQUIRED NUMBER OF DWARF BIRCH WITH ADDITIONAL SHRUB SPECIES AS LISTED ON THE DRAWINGS.



POA-1989-402-R
POA-2004-281-4

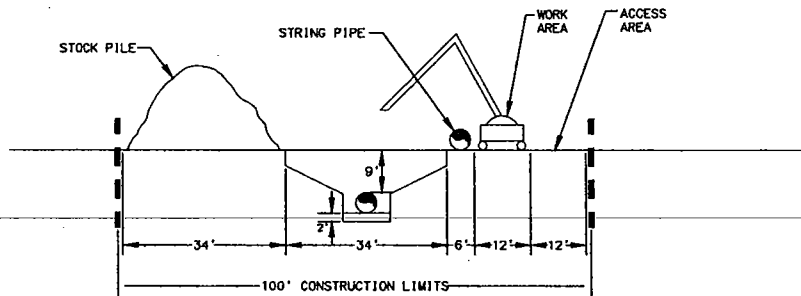
Typical Native Planting Sta 5+40 to Sta 8+00
for Class C Wetlands
NAME: Municipality of Anchorage
PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION
LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska
WATERBODY: North Fork Campbell Creek
SHEET: 25 of 29 DATE: 04/12/2007



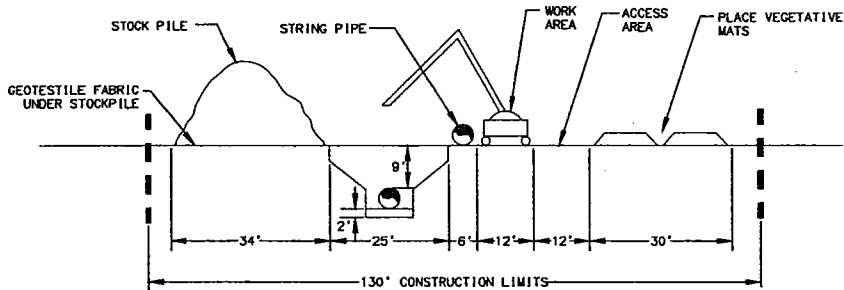
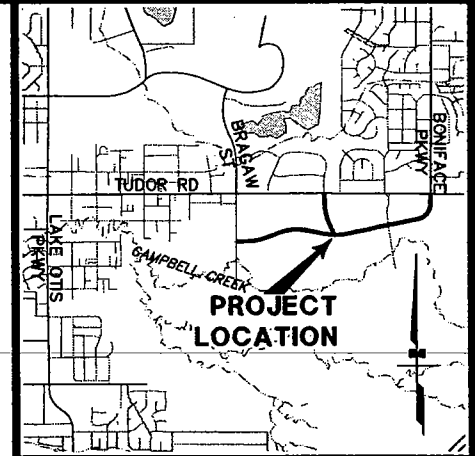
STA 27+60 TO STA 38+60 AND
STA 46+80 TO STA 54+20

POA-1989-402-R
POA-2004-281-4

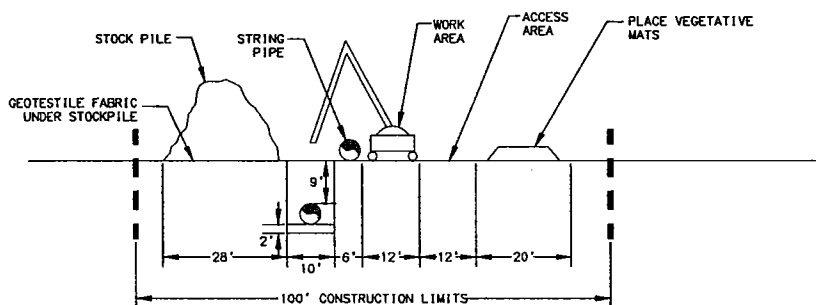
Peat Overexcavation Detail
NAME: Municipality of Anchorage
PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION
LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska
WATERBODY: North Fork Campbell Creek
SHEET: 26 of 29 DATE: 04/12/2007



- ① TRENCH TYPE = OS (OPEN TRENCH DURING SUMMER,
NON-WETLAND AREA ONLY)
NTS



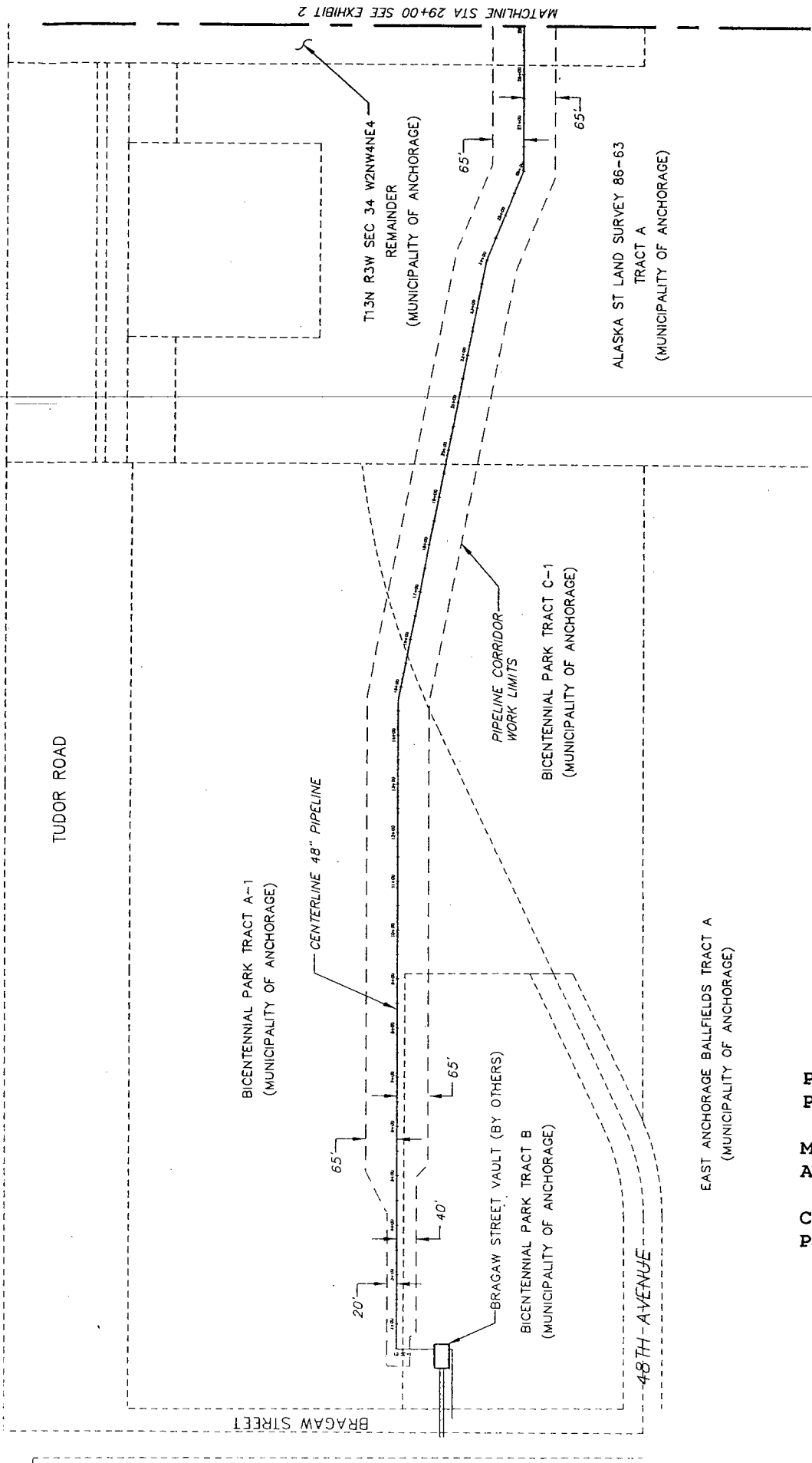
- ② TRENCH TYPE = OW (OPEN TRENCH IN WETLANDS
DURING WINTER)
NTS



- ③ TRENCH TYPE = TS (USE TRENCH SHIELD IN WETLANDS)
NTS

POA-1989-402-R
POA-2004-281-4

AWWU Waterline Construction (TYP)
NAME: Municipality of Anchorage
PROJECT: EAST 48th AVENUE/BONIFACE
PARKWAY EXTENSION
LOCATION: Sec. 34/35, T13N, R3W, Seward
Meridian, Anchorage, Alaska
WATERBODY: North Fork Campbell Creek
SHEET: 27 of 29 DATE: 02/22/2007



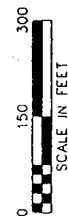
NOTE:

NO FIELD SURVEY WAS PERFORMED AS A PART OF PREPARING THIS EXHIBIT.
THE LOCATION OF THE PROPERTY BOUNDARIES SHOWN IS APPROXIMATE

POA-1989-402-R
POA-2004-281-4

Municipality of Anchorage
AWWU Pipeline

Campbell Creek
Page 28 of 29 4/12/07



REUSE OF DOCUMENTS
THIS DOCUMENT AND THE
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AND IS NOT TO BE USED, IN
WHOLE OR IN PART, FOR ANY
OTHER PROJECT WITHOUT
WRITTEN AUTHORIZATION OF
AWWU.



Exhibit 1
Pipeline Corridor
Work Limits
Tracts MT-M7
CH2MHILL
301 W. NORTHERN LIGHTS BLVD.
ANCHORAGE, ALASKA 99503
907-276-2531

MUNICIPALITY OF ANCHORAGE - WATER AND WASTEWATER UTILITY

Project No. 0000000535
Layout: Limits-1
Cris: 1836-1837
Date: April 12, 2007
Scale: 1" = 300'
Drawn By: Jorge Magoley
Checked By: Tom Wolf

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES
OFFICE OF PROJECT MANAGEMENT AND PERMITTING

OFFICE OF PROJECT MANAGEMENT AND PERMITTING
550 WEST 7TH AVENUE, SUITE 705
ANCHORAGE, ALASKA 99501-3559
PHONE: (907) 269-7470/FAX: (907) 269-3981

NOTICE OF APPLICATION
FOR
CERTIFICATION OF CONSISTENCY WITH THE
ALASKA COASTAL MANAGEMENT PROGRAM

Notice is hereby given that a request is being filed with the Office of Project Management and Permitting for a consistency determination, as provided in Section 307(c)(3) of the Coastal Zone Management Act of 1972, as amended [16 U.S.C. 1456(c)(3)], that the project described in the Corps of Engineers Public Notice No. POA-1989-402-R and POA-2004-281-4, Campbell Creek, will comply with the Alaska Coastal Management Program and that the project will be conducted in a manner consistent with that program.

This project is being reviewed for consistency with the Alaska Coastal Management Program. Written comments about the consistency of the project with the applicable ACMP statewide standards and district policies must be submitted to the Office of Project Management and Permitting (OPMP). For information about this consistency review, contact OPMP at the address or phone number above, or visit the ACMP web site at <http://www.alaskacoast.state.ak.us/Projects/projects.html>.

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION
DIVISION OF WATER
401 Certification Program
Non-Point Source Water Pollution Control Program

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WQM/401 CERTIFICATION
555 CORDOVA STREET
ANCHORAGE, ALASKA 99501-2617
PHONE: (907) 269-7564/FAX: (907) 334-2415

NOTICE OF APPLICATION
FOR
STATE WATER QUALITY CERTIFICATION

Any applicant for a federal license or permit to conduct an activity that might result in a discharge into navigable waters, in accordance with Section 401 of the Clean Water Act of 1977 (PL95-217), also must apply for and obtain certification from the Alaska Department of Environmental Conservation that the discharge will comply with the Clean Water Act, the Alaska Water Quality Standards, and other applicable State laws. By agreement between the U.S. Army Corps of Engineers and the Department of Environmental Conservation, application for a Department of the Army permit to discharge dredged or fill material into navigable waters under Section 404 of the Clean Water Act also may serve as application for State Water Quality Certification.

Notice is hereby given that the application for a Department of the Army Permit described in the Corps of Engineers' Public Notice No. POA-1989-402-R and POA-2004-281-4, Campbell Creek, serves as application for State Water Quality Certification from the Department of Environmental Conservation.

After reviewing the application, the Department may certify there is reasonable assurance the activity, and any discharge that might result, will comply with the Clean Water Act, the Alaska Water Quality Standards, and other applicable State laws. The Department also may deny or waive certification.

Any person desiring to comment on the project, with respect to Water Quality Certification, may submit written comments to the address above by the expiration date of the Corps of Engineer's Public Notice.